



# One VA Capital

## Investment Process

March 2000

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS.....</b>	<b>i</b>
<b>LIST OF FIGURES AND TABLES .....</b>	<b>iii</b>
<b>HOW TO USE THE GUIDE.....</b>	<b>iv</b>
<b>I. EXECUTIVE SUMMARY .....</b>	<b>v</b>
<b>II. CAPITAL INVESTMENT METHODOLOGY .....</b>	<b>1</b>
<b>A. OVERVIEW .....</b>	<b>1</b>
<b>B. BACKGROUND .....</b>	<b>2</b>
<b>C. UPDATES TO THE CAPITAL INVESTMENT PROCESS .....</b>	<b>4</b>
<b>D. CAPITAL INVESTMENT PLANNING PROCESS .....</b>	<b>12</b>
1. Functional Development Phase .....	15
2. Technical Review Phase .....	15
3. Strategic Review Phase .....	15
<b>E. PRIORIZATION PROCESS.....</b>	<b>16</b>
1. Specify Decision Criteria .....	16
2. The Multi-Attribute Decision Model .....	17
3. Additional Level of Criteria .....	19
4. Ranking Investment Proposals .....	19
<b>F. DATA VALIDATION.....</b>	<b>20</b>
<b>G. APPLICATION PROCESS .....</b>	<b>24</b>
<b>H. EXECUTION PHASE AND PERFORMANCE MEASUREMENT .....</b>	<b>32</b>
<b>III. CAPITAL INVESTMENT METHODOLOGY APPLICATION .....</b>	<b>35</b>
<b>PART I. CAPITAL INVESTMENT PROPOSAL GENERAL INFORMATION.....</b>	<b>36</b>
<b>PART II. CAPITAL INVESTMENT PROPOSAL CRITERIA .....</b>	<b>42</b>
<b>PART III. INFORMATION TECHNOLOGY INVESTMENT PROPOSAL CRITERIA .....</b>	<b>44</b>
<b>PART IV. LEGACY SYSTEM PROPOSALS ONLY .....</b>	<b>46</b>
<b>IV. APPLICATION GUIDES.....</b>	<b>47</b>
<b>A. CAPITAL INVESTMENT PROPOSAL CRITERIA GUIDE .....</b>	<b>48</b>

<b>B. INFORMATION TECHNOLOGY INVESTMENT PROPOSAL CRITERIA GUIDE .....</b>	<b>75</b>
<b>C. LEGACY SYSTEM INVESTMENT PROPOSAL CRITERIA GUIDE .....</b>	<b>104</b>
<b>D. COST-EFFECTIVENESS ANALYSIS GUIDE .....</b>	<b>108</b>
<b>E. ALTERNATIVES ANALYSIS GUIDE .....</b>	<b>114</b>
<b>F. RISK ANALYSIS GUIDE .....</b>	<b>118</b>
<b>G. EARNED VALUE ANALYSIS GUIDE .....</b>	<b>129</b>
<b>V. ATTACHMENTS .....</b>	<b>136</b>
<b>INFORMATION TECHNOLOGY INVESTMENT PORTFOLIO SYSTEM .....</b>	<b>137</b>
<b>CONTACTS .....</b>	<b>139</b>
<b>DATA SOURCES .....</b>	<b>140</b>
<b>GLOSSARY OF TERMS.....</b>	<b>143</b>

## LIST OF FIGURES AND TABLES

Table 1	Thresholds.....	3
Figure 1	FY 2002 Decision-Making Hierarchy (VHA Construction).....	8
Figure 2	Assigned Weights for FY 2002 (VHA Construction).....	9
Figure 3	FY 2002 Decision-Making Hierarchy (All Others).....	10
Figure 4	Assigned Weights for FY 2002 (All Others).....	11
Figure 5	Capital Formulation Process.....	14
Table 2	Decision Criteria.....	17
Table 3	Standard Data Validation Form.....	22
Table 4	Potential Alternatives.....	26
Table 5	Capital Investment Proposal Application Checklist.....	29
Table 6	IT Investment Proposal Application Checklist.....	30
Table 7	Legacy System Investment Proposal Application Checklist.....	31
Figure 6	FY 2002 Decision Hierarchy for the CIO.....	78
Figure 7	FY 2002 Decision Hierarchy Weights for the CIO.....	79
Table 8	IT Data Validation Form.....	102
Table 9	Legacy System Data Validation Form.....	105

## HOW TO USE THE GUIDE

1. Read Chapter II-A-H for an overview of the Capital Investment Methodology.
2. Read Chapter II-G to review the steps in completing the application.
3. Use the appropriate checklists provided in Chapter II-G to make sure all requirements have been fulfilled.
4. For standard capital investment proposals, use Chapter III, Parts I and II to complete the application.
5. For information technology investment proposal, use Chapter III, Parts I, II and III to complete the application.
6. For Legacy System investment proposals, use Chapter III, Parts I and IV to complete the application.
7. Use Chapter IV-A to complete Part II of the Application
8. Use Chapter IV-B to complete the Cost-Effectiveness analysis
9. Use Chapter IV-C to complete the Alternatives analysis
10. Use Chapter IV-D to complete the Risk analysis
11. Use Chapter IV-E to complete the Earned Value analysis

\*Electronic versions of the *Guide* and all other source materials can be found at:

[vawww.va.gov/budget/capital](http://vawww.va.gov/budget/capital)

## I. EXECUTIVE SUMMARY

The VA Capital Investment Methodology Guide (*Guide*) provides professionals in the Department of Veterans Affairs (VA) with a basic reference for planning, preparing, evaluating and prioritizing capital investments. The *Guide* is intended to facilitate and improve VA compliance with new and existing government rules, in particular—the Government Performance and Results Act (GPRA), the Clinger-Cohen Act, Federal Acquisition and Streamlining Act (FASA). A parallel aim of this *Guide* is to integrate a number of best practices into the fabric of VA's capital investment process, learning from the best planning, performance measurement, and execution monitoring examples found in government and private industry.

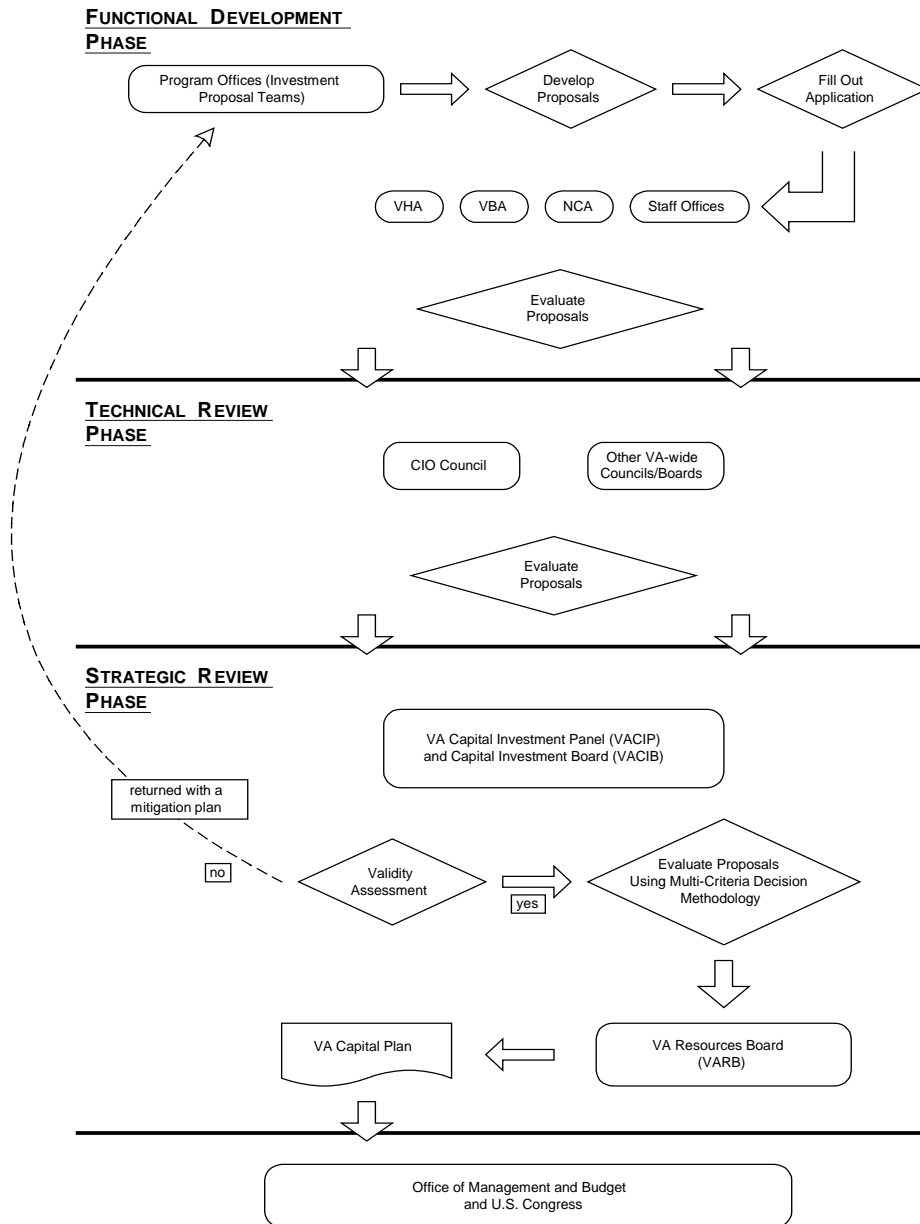
As stated in VA's Strategic Plan, the VA's primary mission and goals concern the veterans and their families. In order to accomplish those goals, procedures and policies are being put into place to dovetail VA's capital asset initiatives and activities into strategic alignment. This *Guide* provides a framework and a method for developing and evaluating capital investment and spending proposals to ensure they are not only consistent with VA's Strategic Plan, but so they also actively promote VA's goals and objectives.

After reading the *Guide*, Investment Proposal Teams (IPTs) can expect to understand the structure of the capital investment planning process, from **Formulation** to **Execution**, as well as meet the requirements that are expected of a completed application.

**Formulation** is the first step in the process and consists of the following three phases:

- **Functional Development Phase.** At the operational level in Central Office and at the field level, strategic needs are analyzed, and capital and other assets are planned to help fulfill those needs. As capital proposals are developed, data are developed also to provide technical and strategic reviewers with the necessary information to evaluate and prioritize proposed spending projects. Tools have been provided in the *Guide* to standardize the process. These include templates and instructions for completing the Application, Cost-Effectiveness Analysis, Alternatives Analysis, and Risk Analysis.
- **Technical Review Phase.** Proposed projects undergo technical scrutiny. Investment Proposals are evaluated and prioritized by a board or council of subject matter experts where program and technical oversight exists. Evaluation criteria vary by asset type and may be updated annually, if there are changes in process or strategic direction.

- Strategic Review Phase.** At VA Department level, proposed projects are evaluated, prioritized, and measured against VA's Strategic Plan and OMB's requirements, to determine the best combination of assets to meet VA's mission, obligations, goals, and objectives. A data validation form is used to ensure that the proposals undergo quality control, which means that the application consists of relevant, complete, and accurate information with supporting documentation as well as additional primary documents.



**Execution:** This phase occurs after proposals have been approved, funded and prior to the project being initiated. It is during this step that proposal teams submit progress reports to determine if schedules and costs are on target. An Earned Value Analysis tool and instructions have been added to the *Guide* in order to aid the proposal teams in this step. Execution review is a crucial part of the capital planning process, since it promotes project management and corrective actions that will result in benefits to the veteran as well as the Department as a whole.

The VA *Capital Investment Methodology Guide* provides a structure for each of these phases. The tools provided in the *Guide* are Cost-Effectiveness Analysis, Alternatives Analysis, Risk Analysis, Earned Value Analysis and an Application that prompts the developers with standard questions asked by the VA Capital Investment Panel. The entire Application is to be completed and submitted for each capital proposal for use in the technical and strategic review phases. Prior to scoring and ranking proposals, a Data Validation Form is used to ensure that the proposals undergo quality control. All proposal data will be validated to ensure that decisions are based on relevant, complete, and accurate information with supporting documentation as well as additional primary source documentation.

Since VA's capital investments span a wide range of complex and competing opportunities and VA's strategic goals are so diverse, decision-making requires evaluating a variety of decision criteria. This complex task is done using a multi-attribute decision model. A key component of the *Guide* is the capital investment decision-making methodology. The *Guide* outlines the updated methodology that the VA Capital Investment Panel and VA Capital Investment Board use to evaluate, rank, and prioritize capital proposals. The needs to standardize diverse and competing investments and withstand audits were primary drivers in creating the Capital Investment Methodology (CIM) and the companion *Guide*. Overall, the *Guide* provides a framework and a method for developing and evaluating capital investment proposals to ensure they are not only consistent with VA's Strategic Plan, but they also actively promote VA's goals and objectives.





## II. CAPITAL INVESTMENT METHODOLOGY

### A. OVERVIEW

In September 1997, the Department of Veterans Affairs Capital Investment Board (VACIB or Board), with support from the Capital Investment Panel (VACIP or Panel), faced the task of prioritizing nearly 50 major proposed investment projects for submission to the Office of Management and Budget (OMB). The lack of complete and uniform information for each of those proposals, made decision making on 50 diverse proposals a daunting task. The task was made increasingly difficult by the fact that government regulations—the Government Performance Results Act (GPRA) and the Clinger-Cohen Act—require additional diligence and care in the approval process.

Through this *Guide*, VA is improving the components that make up the decision-making process. These components extend throughout VA's capital planning process and acquisition structure—the field level where most capital proposals usually originate; the Administration level (VHA, VBA, NCA, and Staff Offices), where program and technical oversight exists; the expert level (Advisory Board, CIO Council, and other subject matter expert boards and councils); and at the Department level, where strategic oversight and vision occur.

This *Guide* provides a blueprint for decision-making that extends throughout VA. The aim is to provide sufficient guidance such that each proposal submitted to the VACIB for approval will contain all of the elements required by OMB, Federal Acquisition Streamlining Act (FASA), GPRA, the Clinger-Cohen Act, as well as other Executive and Congressional mandates. After successful **budget formulation** (Step 1), the same process can be used later in the **budget execution** phase (Step 2) in evaluating the continued viability of the project or the performance of a previously funded investment. During this second step, the Department revalidates the planning assumptions that were made 18 months to two years earlier on capital proposals that have already been selected for funding. All previously approved proposals are required to complete Execution Review sheets. This sheet includes indicators for scope, cost, schedule, and performance measurement obtained from the original applications. This tracking portion of the planning process requires that proposal teams provide actual data for each quarter. Earned Value analysis has been added to this year's process in order to enhance the monitoring requirements. (See Chapter IV-G)

The intention of the entire capital planning process is to lay the foundation at the beginning of the capital decision-making process—i.e., when needs, goals, objectives, and proposals are first assessed—so the rest of the data structure can be assembled much more logically and easily.

## B. BACKGROUND

Federal capital investment decision-making has undergone profound changes in the wake of GPRA and OMB directives, and in keeping with the President's reinvention and reengineering paradigms. VA's capital budgeting process was characterized as "stove-pipe planning." Planning was nearly vertical within each of VA's major divisions with limited integration among the different Administrations (i.e., VHA, VBA, NCA, and Staff Offices). Each year, the prior year's budget was adjusted by the rate of inflation as well as any special projects that might be required, and then submitted to Congress. Individual projects were identified and planned at lower organizational levels, and passed along to upper management for approval.

Most planning did not typically include analysis of risks or costs and benefits of proposals. Also lacking was justification as part of strategic planning and any assessment of alternatives outside the Department and the Federal Government. OMB directed VA and all federal agencies to address each of these points in current and future capital programming.

OMB, in collaboration with VA and other major agencies and departments, developed the *Capital Programming Guide* (Supplement to Part 3 of OMB Circular A-11). The *Capital Programming Guide* was intended to assist federal agencies in planning, budgeting, procuring, and managing capital assets. The *Capital Programming Guide* integrated the requirements of GPRA, the Clinger-Cohen Act, FASA, and other Federal initiatives, providing a comprehensive reference that agencies should use in all phases of capital investment decision-making.

The *Capital Programming Guide* expedited VA's pursuit of a comprehensive asset plan and investment policy. On June 7, 1997, VA's Deputy Secretary established the VACIB and the VACIP. The purpose of the VACIB is to issue policy to produce a comprehensive system-wide integrated capital investment planning process. The fundamental goal of the VACIB is to ensure that capital investments are based on well-established business investment practices and promote the One VA vision by conforming to the overall strategic goals and objectives of VA.

The VACIB oversees the approval of all capital investment proposals that exceed certain threshold requirements, represent a high risk or high visibility or are crosscutting. Approved proposals constitute the VA Capital Plan and support annual budget requests. Those proposals that meet or exceed the established thresholds are required to undergo VACIB approval. Table 1, on the following page, lists the thresholds, including the addition of Enhanced Sharing Agreements and Energy Savings Performance Contracts (ESPC). (See page 5, #5)

<b>Table 1: Thresholds for Capital Investments Requiring VACIB Approval</b>				
<b>Total Acquisition Costs</b>				
<b>Categories</b>	<b>VHA</b>	<b>VBA</b>	<b>NCA</b>	<b>Staff Offices</b>
Infrastructure Proposals <sup>1</sup>	\$4M	\$4M	\$4M	\$1M
Medical Equipment	\$1M/piece	N/A	N/A	N/A
Non-Medical Equipment	\$500,000/piece	\$500,000/piece	\$500,000/piece	\$500,000/piece
Information Technology: Total acquisition cost or Life-Cycle Costs	\$10M or \$30M	\$2M or \$6M	\$1M or \$3M	\$1M or \$3M
Enhanced-Use Leases <sup>2</sup>	\$4M	\$4M	\$4M	\$4M
Enhanced Sharing Agreements <sup>2</sup>	\$4M	N/A	N/A	N/A
Leases/GSA Space	\$600,000	\$600,000	\$600,000	\$600,000
ESPC	\$4M/Facility or \$10M/Multiple Facilities	\$4M/Facility or \$10M/Multiple Facilities	\$4M/Facility or \$10M/Multiple Facilities	\$4M/Facility or \$10M/Multiple Facilities

<sup>1</sup>Includes the Construction and Medical Care (NRM) appropriations.

<sup>2</sup>Total value of proposal exceeds \$4 million in NPV over the term of the proposal (both VA and developers). Enhanced Sharing Agreements provide the flexibility for VA to share (buy or sell) health care resources with other community health care providers. Enhanced Sharing Agreements for space will use the E-U definition. For all other VHA categories, existing thresholds will apply.

The VA Capital Investment Panel (VACIP) was created to support the VACIB. The Panel is comprised of senior staff in each of the VA's major administrations: VHA, VBA, NCA, and Staff Offices. The Panel's role is to assess and review capital investment proposals, evaluate, score, and prioritize proposals, and make recommendations to the VACIB. Their role also includes serving as liaison between representative Board members and the administrations, as well as assist in improving or defending capital investment proposals during the review process.

In 1997, as part of the goal to ensure that investments were based on well-established business investment practices, VA contracted Economic Systems, Inc. (ESI) to conduct a study of best practices. For this study, ESI examined the capital programming needs of VA and provided analyses of exemplary practices found in private industry and in other government areas. ESI selected and recommended to VA applicable practices in its report entitled *Capital Investment Best Practices Survey*. VA incorporated 20 of 28 recommendations and developed a new capital investment process that was operationalized in the CIM Guide dated May 1998.

In November 1999, VA contracted PricewaterhouseCoopers, LLP (PwC) to conduct a current survey of best practices in capital investment planning processes, to make recommendations on improving the existing process, and to create standardized electronic templates for cost-effectiveness, alternatives, risk, and earned value analyses (see Chapter IV). These recommendations are expected to streamline the process, making it more efficient and effective. The

following section outlines six of the major changes to the capital planning process.

### C. UPDATES TO THE CAPITAL INVESTMENT PROCESS

In an effort to continually improve the capital investment planning process, VA incorporated several best practices, including recommendations from the VA Capital Investment Panel “Lessons Learned Forum” held in December 1999. In addition, VA envisioned providing Investment Proposal Teams (IPT) with electronic templates to facilitate development of investment application and ease of data capture and transmission by making templates web based and ITIPS importable. The updates that have been implemented for the FY 2002 proposal process include:

1. ***Utilizing a standard discount rate of 7% for all proposals and alternatives:*** The use of a discount rate when calculating net present value (NPV) is solely for comparison to alternative investments outside of the organization. OMB Circular A-94, Appendix C, presents rates in accordance with risk-free rates of Treasury bonds. This number is used to compare the risk-free alternative of investing in bonds of differing maturity rates versus investing the same funds into internal projects. Since this is not an option for most government agencies, the use of a standard discount rate is an acceptable method for calculating the opportunity cost of capital. The use of 7% is presented in OMB Circular A-94 as the acceptable alternative standard rate and is in use at several other government agencies. *If the proposal team chooses not to use the standard discount rate, then justification for the amended rate must be included in the application.*
2. ***Matching financial and economic life of project proposals and incorporating disposal into Cost-Effectiveness Analysis (CEA):*** When projecting expenditures within the CEA, the IPT should utilize ***only*** the expected economic life of the asset. For example, a building may have an expected physical life of 50 years. However, the expected usefulness of the building is only 15 years, after which the VA would prefer to dispose of the asset. The NPV should be calculated for cash outflows over the next 15 years with a residual value of the building discounted from the 16<sup>th</sup> year. Disposal costs should be discounted from the 16<sup>th</sup> year as well.
3. ***Including a tracking number with each proposal application:*** Assigning a VACIP tracking number to each proposal will simplify and improve the quality of post award reviews during the Execution Phase. Currently, VA assigns tracking numbers to some of the proposals. However, applying this requirement to all capital investment proposals will improve quality control.
4. ***Submitting project plans with critical path milestones (CPM) and expenditures (outlays):*** This is essential to the completion of an Earned-

Value analysis. The project plan reduces risk by highlighting where controls are to be implemented and can provide additional controls for cost and schedule. Critical path milestones represent a significant point in the development of a project, where the initiation of each milestone is dependent on the completion of a prior milestone (a linear process). As a result, monitoring each CPM through the use of a project plan and Earned Value analysis will improve overall project management within the Department and provide the potential to forecast performance of investment implementation. (See Chapter IV-G for details and page 121 for an example)

5. ***Adding Enhanced Sharing Agreements (ESA) and Energy Savings Performance Contracts (ESPC) to the list of project categories:*** On August 27, 1999 the VACIB agreed that ESA and ESPC would be added to the Capital Investment Process for review effective October 1, 1999. VA received authorization to enter into sharing agreements (Enhanced Sharing, title 38 U.S.C. sec. 8151) that provide or sell health care resources to any eligible sharing partner and also to engage in long-term contracts (ESPC, title 42 U.S.C. sec. 8287) with private developers to replace components and equipment within a facility's energy system or at multiple facilities.

**Enhanced Sharing Agreements** allow individual facilities to buy or sell services with any health-care provider, or other entity or individual. These agreements can be made for acquisition of infrastructure, equipment, IT, and personnel services. There are no maximum dollar limitations for the investments. The thresholds for submitting million ESA investment proposals to the VACIB are as follows:

- Any Capital Infrastructure space agreements or investments that have a combined NPV value for consideration (by VA or the developer) that exceeds \$4 million
- Any lease that has an annual payment greater than \$600,000
- Any IT agreement that exceeds \$10 million
- Any individual piece of medical equipment that is shared or acquired by VA that exceeds \$1million

**ESPC** is designed to reduce energy consumption in federally owned and operated facilities. It is assumed that by reducing energy consumption, the demand for constructing additional generation plants will not be necessary. A typical ESPC contract consists of VA hiring a private developer who invests their capital in high-technology energy improvements, which results in VA significantly reducing energy consumption. A significant portion of the savings is passed on to the

developer in the form of annual payments, which amortizes their investment up to a period not to exceed 25 years.

The Network in conjunction with the ESPC contractor will group identified Energy Conservation Savings Measures (ECSM) into proposed groups or categories based on similar technologies. This grouping will facilitate a group or category of ECSMs, based on technology that can be easily performed by a contractor or contractors with a particular skill trade or capacity to perform the work. The Network will then identify proposed task orders, consisting of a single group/category of ECSM or multiple group/categories of ECSMs. These proposed task order groupings of ECSMs will be reviewed by the VACIP to ensure that each task order represents an ESPC initiative that is a unique and comprehensive investment initiative of like technologies rather than fragmented task orders that have been (or may have been grouped) for the purpose of avoiding an established review threshold.

Once approved by VACIP, any proposed award of a task order (or an individual amendment to an original task order under the amended task order approach) that exceeds \$4 million for a single facility, or \$10 million for a task order involving multiple facilities within a network will require submission of a capital investment proposal to the VACIB.

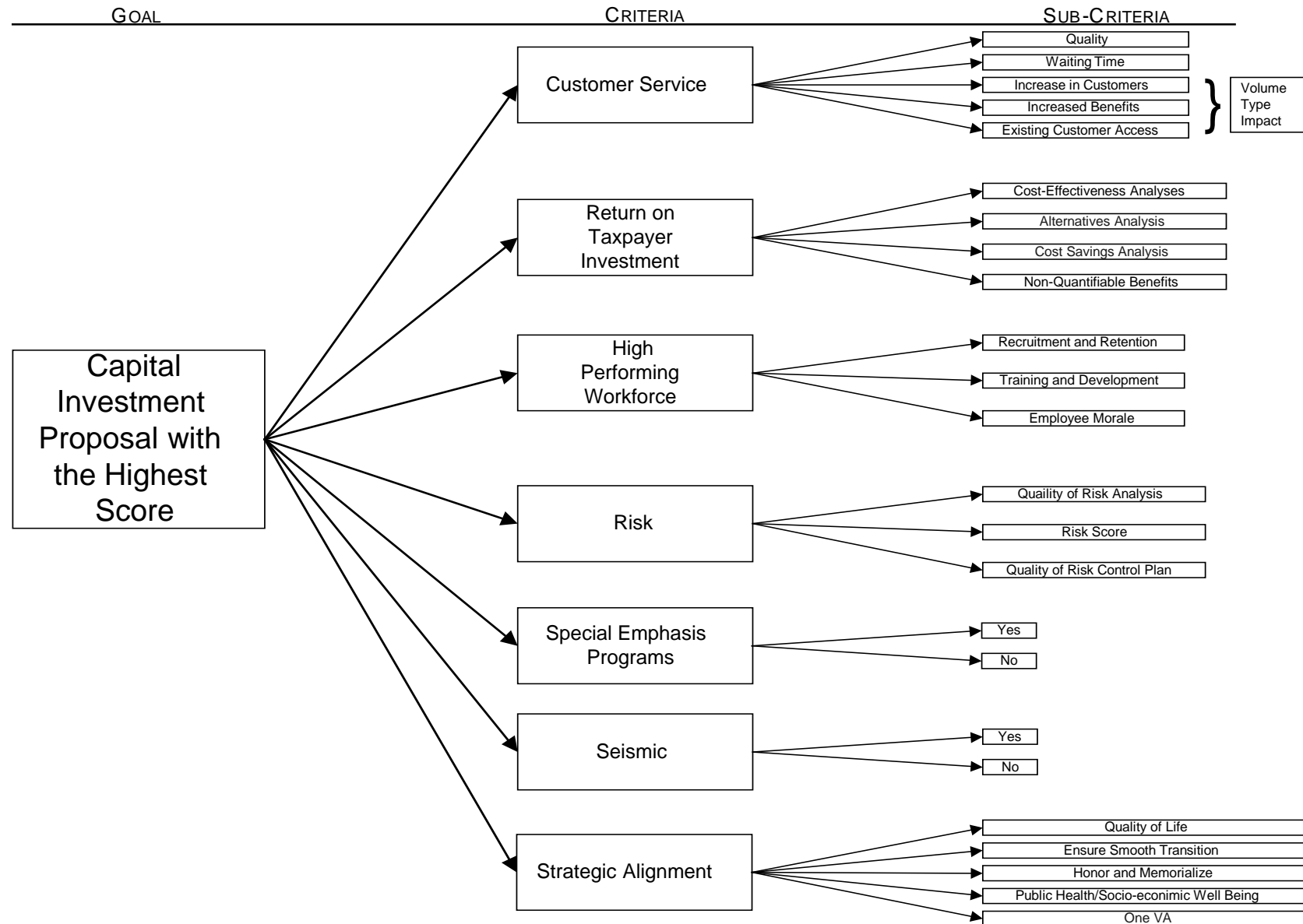
6. ***Updating the Decision-Making Analytic Hierarchy Model (AHP):*** On February 3, 2000 the Board approved two models for FY 2002. The first model (Figure 1) includes the **Seismic** and **Special Emphasis** criteria, which will apply only to VHA Construction proposals. The second model (Figure 3) applies to **all proposals other than VHA Construction** and excludes the two criteria. **Figures 2 and 4** illustrate the new weights that have been assigned to each model. Changes to the models resulted from concerns that were stated at the Lessons Learned Forum. In addition, the AHP model was revised to incorporate strategic alignment as a major criterion. The sub-criteria were updated in order to reduce redundancies and improve analysis with the use of standardized electronic templates (i.e., cost-effectiveness, alternatives, and risk). Finally, *Impact* (the degree to which this investment will impact the objectives of the sub-criteria) was added to Customer Service in order to evaluate the overall effect proposed by the investment.

The updates to the FY 2002 Decision-Making Hierarchy are expected to create a stronger linkage between capital and strategic planning. Additionally, the incorporation of standardized templates will aid the investment proposal teams in developing the analysis that supports the application, while changes to the layout of the *Guide* will help navigate the proposal teams through the overall capital investment planning process.

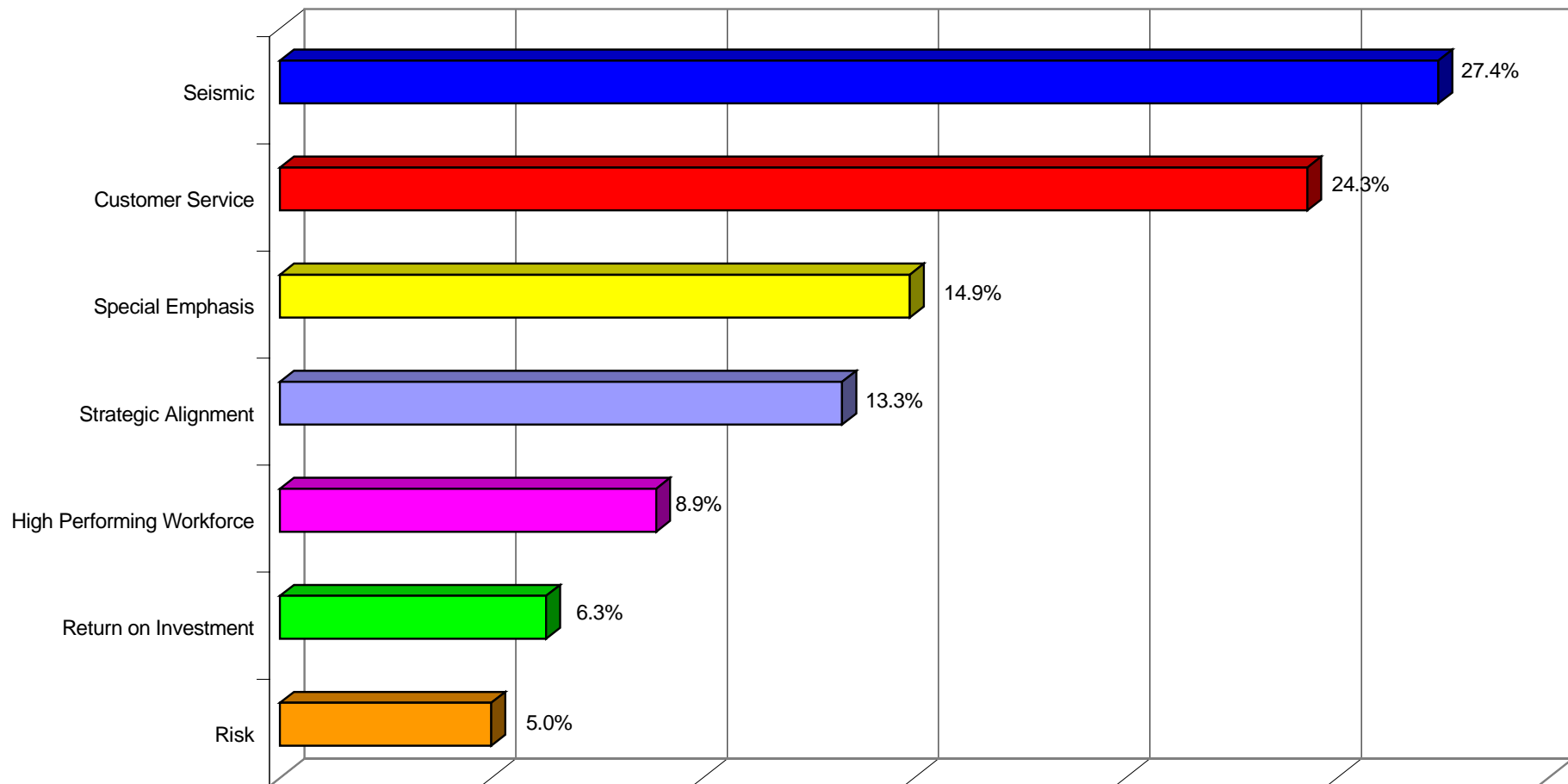
This page is intentionally blank



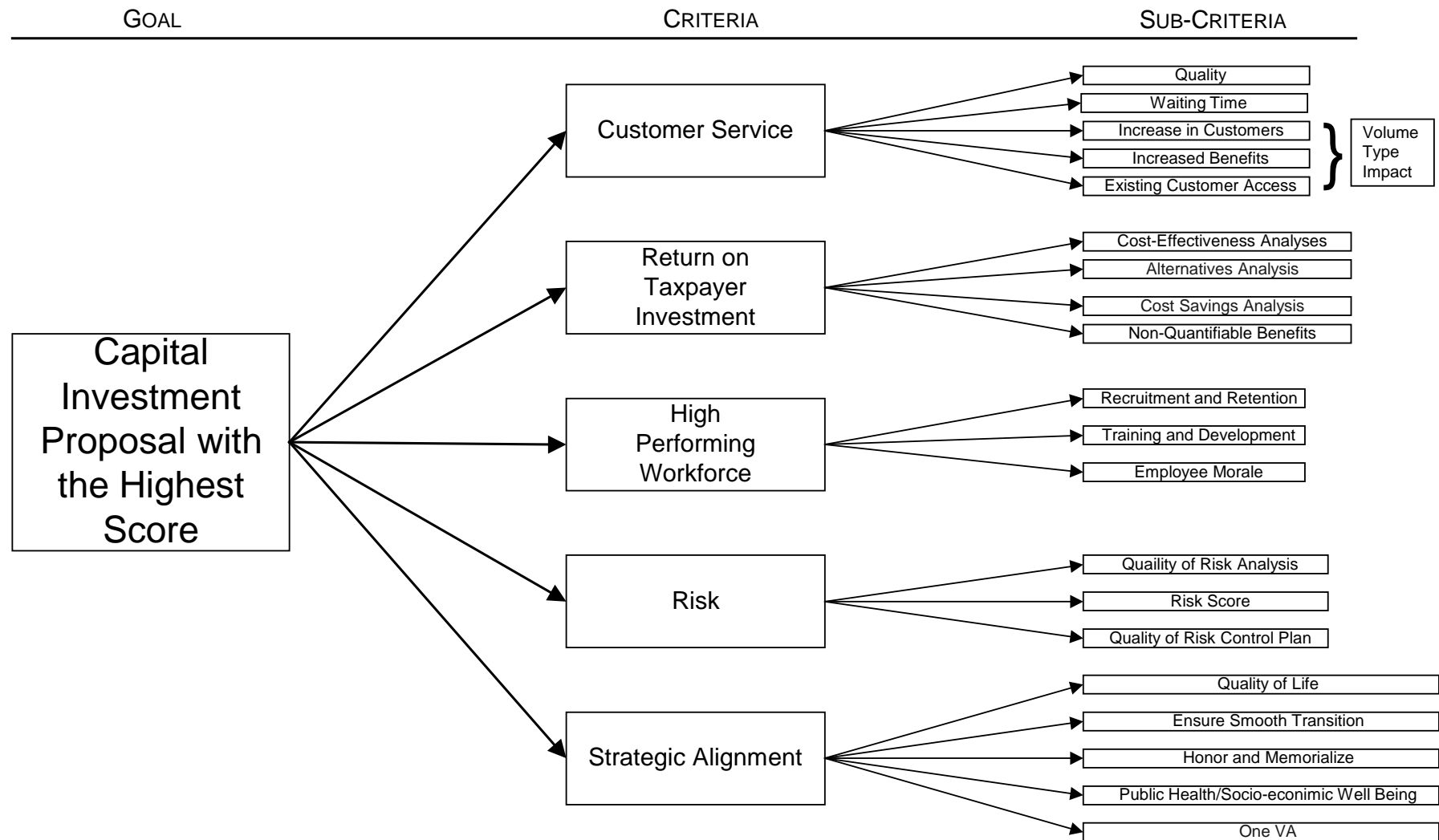
Figure 1: FY 2002 Decision-Making Hierarchy (VHA Construction Only)



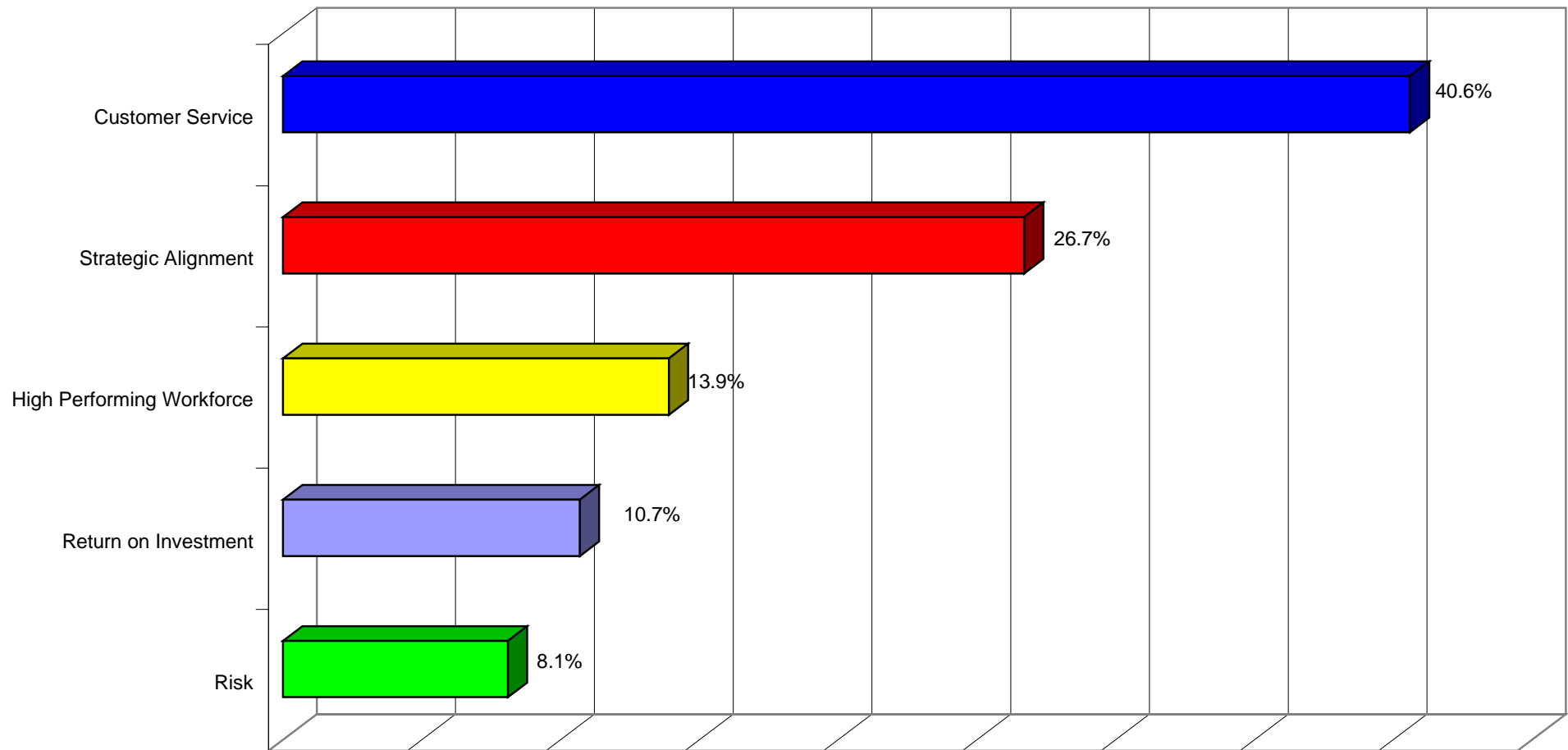
**Figure 2: Assigned Weights for FY 2002 Decision-Making Hierarchy  
(VHA Construction only)**



**Figure 3: FY 2002 Decision-Making Hierarchy  
(All Proposals Other than VHA Construction)**



**Figure 4: Assigned Weights for FY 2002 Decision-Making Hierarchy  
(All Proposals Other than VHA Construction)**



## D. CAPITAL INVESTMENT PLANNING PROCESS

The capital investment planning process is largely determined by the structure of VA's organization. One of the stated aims of the current Capital Plan is to improve the capital investment decision-making process. Previously, decisions were not integrated horizontally across the different parts of the Department. The decision-making process set forth in this *Guide* aims to measure all capital proposals against overall Department strategic plans and objectives. This requires identifying performance measures (see Chapter II-H for more details) and selecting a mix of investments that meet VA strategic goals and maximize return to the taxpayer.

Prior to VACIB review, decisions about capital proposals pass a bottoms-up review through several vertical levels for technical review. Decisions about proposals below established thresholds (see Table 1, Page 3) will continue to follow existing procedures and will be made at Administration and staff levels. Those decisions should nonetheless promote each Administration's strategic goals and objectives. It is recommended by GAO (March and July, 1999 Congressional hearings) that a comparable policy be adopted for proposals below the established thresholds where investment proposals are subject to a process that identifies similar criteria and provides linkage to the Department's Strategic Plan and the Administrations' plans, goals, and objectives.

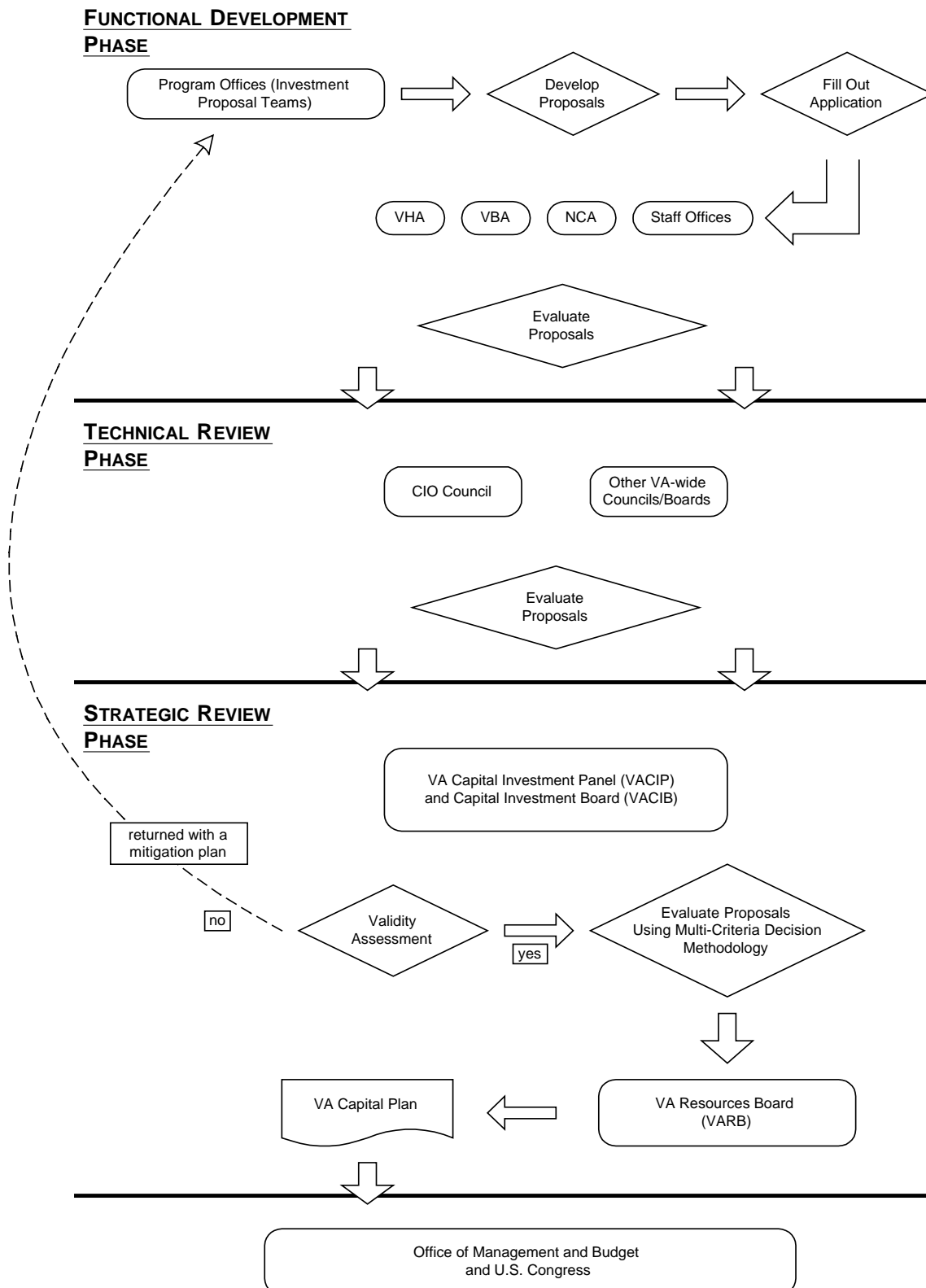
Also, implicit in the decision-making flow is feedback. Decision-makers have the responsibility to provide constructive feedback to Administration and staff levels, which is used in the development of current and future proposals. The validity assessment and the mitigation plan are the two primary tools used to document deficiencies and provide recommendations to improve capital investment applications.

The Capital Investment Methodology Application (see Chapter III, Parts I-IV), the standardized electronic templates and corresponding guides (see Chapter IV) and the Data Validation Form simplify the process of integrating capital investment planning into the strategic planning framework.

The types of data required in the Application are explicitly specified. The intent is to produce uniform responses that do not result in variable or confusing information for each proposal that is submitted. The Application solicits information on each of the major criteria categories that the Panel will use in making their recommendations to the Board. The data in the Application will be evaluated using the Data Validation Form to determine whether or not information is sufficient for completing the review process. The Data Validation Form lets the proposal team know exactly where deficiencies exist and how to correct them.

Capital proposals actually move through a variety of decision checkpoints. At any point, if information is inadequate, the proposal is sent back to the proposal developers for additional work. The level of the organization at which the decision is made often determines the kinds of decisions made and the decision tools used. Each organizational level should receive *input* data from below and supply improved value added *output* data to the next higher level. At the same time, information is also fed back to previous levels in the organization. Thus, the ability to make decisions at any given level depends upon the quality of data and decisions made at lower levels, as well as upon the quality of feedback from higher levels. The aim is to accurately identify the links in the decision-making chain so that the whole process flows without bottlenecks.

Beyond VA, OMB and Congress also make decisions. The formulation process flow is shown in Figure 5 on the following page. The process begins with the identification of a need or performance gap and is further impacted by the enactment of laws by Congress and the establishment of procedures and guidelines by OMB. Top management within the Department issues policy statements to Administration and staff levels within VA, which then provides policy direction to program offices.

**Figure 5: The Capital Formulation Process**

## **1. Functional Development Phase**

The Functional Development Phase is at the operational level and depending on the administration, it may occur either at the Central Office or field level, where needs are realized, gap analyses are completed, proposals are developed, and solutions are ultimately applied. Program offices respond by determining what assets and resources are required to carry out Department policy, and thereby meet Department and Administration strategic goals. This phase also includes the development of capital proposals. After proposals are developed, the proposal team fills out the Capital Investment Application, which is an executive summary of the proposal (see Chapter III) and forwards it for review, along with the proposal and supporting documentation.

As proposals are developed, they undergo review first within the separate administrations. A decision is made whether to pass the proposal back for further development, decline the proposal, or pass the proposal forward for higher-level consideration.

## **2. Technical Review Phase**

In the Technical Review Phase, proposals receive early rounds of technical and financial scrutiny from Department-wide councils or Administration boards, as well as some initial prioritization within the owner organization. In the technical review phase, proposals should be separated by type of investment (e.g., infrastructure, non-medical equipment, leases or GSA space assignments, medical equipment, IT, enhanced-use leases, enhanced sharing agreements and energy savings performance contracts). Decision-makers at the field level should prioritize proposals within those types. Avoiding the review of mixed investments for technical viability ensures that technically and strategically qualified proposals receive the highest rankings, under technical review.

In addition, mid-level reviewers should not limit proposals to those that they believe *will* be funded. Strategic decisions made by the VACIB will be made from an overall VA perspective, and might involve choices not anticipated by VHA, VBA, NCA, Staff Offices, Advisory Boards, or the CIO Council. Therefore, mid-level reviewers should submit all technically viable proposals that might serve additional strategic objectives. Proposals that do not “pass,” are sent back for further development, while proposals that do pass are forwarded to the VACIP and VACIB for strategic review.

## **3. Strategic Review Phase**

The Investment Panel uses the Data Validation Form to verify that the data provided is complete and assumptions are acceptable. These validity scores establish a minimum requirement for supporting data and analysis. If the data is evaluated as unacceptable, then the proposal is returned to the originating office



with a validity assessment for corrective action that includes comments and recommendations for improving the application.

Proposals that pass validity are evaluated by the Panel members. The Panel scores proposals on each of the sub-criterion listed in the Decision-Making Hierarchy (see Figures 1 & 3, pages 8 & 10). These scores, which are different than the Data Validation scores, are then fed into an analytic hierarchy process (AHP) tool to strategically prioritize the proposals based on the assigned weights of the major criteria (established by the Board) and sub-criteria (established by the Panel). A decision will be made on a case by case basis if missing information can be provided in time for the proposal to continue in the current review process or be postponed until the next review cycle.

This process produces a prioritized list of sound proposals that will be forwarded to the VACIB. The Board members then review the list of proposals and vote on the strategic mix of proposals that enable the Department to achieve the highest priority goals and objectives. The results are then submitted to the VA Resource Board for budget consideration.

## **E. PRIORIZATION PROCESS**

Prioritization takes place at two levels, by asset type (technical) and across asset types (strategic). At the Strategic Review and IT Technical Review levels, investment proposals use multi-attribute decision modeling techniques. Standard methods of cost-benefit analysis typically will not capture all of the true values and costs of a proposed investment. Such benefits as increased accessibility and reduction in waiting times for customers, for example, may be difficult to quantify in dollar terms. Certain prioritization methods can be used to accommodate the more judgmental factors and impose a disciplined approach to the decision-making process. A hierarchical approach helps to structure the problem and break it down into specific components.

### **1. Specify Decision Criteria**

Selection criteria should be addressed in detail. A hierarchical structure lends itself well to this effort where lower levels in the hierarchy show greater detail in criteria or attributes. Decision-makers' judgment on the relative importance of competing criteria and alternatives then can be expressed at these different levels.

Table 2, on the following page, is a break down of the hierarchy where specific sub-criteria for each of the major criteria are listed. VA continues to review and assess the decision model on an annual basis and makes changes to the hierarchy as necessary in an effort to better align the Capital Investment Methodology with current VA strategic goals. Information requirements need to

be linked directly to specific decision criteria so that the decision-makers or evaluators have sufficient and appropriate data.

**Table 2: Decision Criteria\***

<b>Major Criteria</b>	<b>Sub-Criteria</b>
Customer Service	Quality Waiting Time Increase in New Customers Increased Benefits Increase Access to Existing Customers
Return on Taxpayer Investment	Cost-Effectiveness Analysis Alternatives Analysis Cost Savings Analysis Non-Quantifiable Benefits
High Performing Work Force	Recruitment and Retention Training and Development Employee Morale
Risk	Risk Score Quality of Risk Analysis Quality of Risk Control Plan
Special Emphasis <b>(VHA Construction only)</b>	Yes or No
Seismic <b>(VHA Construction only)</b>	Yes or No
Strategic Alignment	Quality of Life Ensure Smooth Transition Honor and Memorialize Public Health and Socio-economic Well Being One VA

\*See Figures 1 and 3 on pages 8 and 10.

## **2. The Multi-Attribute Decision Model**

Multi-attribute decision modeling is a technique that allows evaluators to consider a number of diverse criteria in reaching a decision. Such models combine evaluations or decisions using both quantitative and qualitative criteria. Rather than using fixed weight scoring techniques, requiring the decision-maker to rank alternatives using arbitrary scales, decision-makers instead make a series of

much simpler—usually pairwise—decisions. The multi-attribute decision model is self-weighting and self-scoring, producing numeric values automatically as decisions are aggregated mathematically.

AHP (Analytic Hierarchy Process) is the multi-attribute or multi-objective technique that VA uses for capital investment prioritization. AHP is well established in operations research literature. Numerous organizations in both government and the private sector use AHP. VA uses COTS software, such as Expert Choice, to operationalize the decision model.

AHP uses a hierarchical model comprised of a goal, criteria, sub-criteria, and alternative outcomes or conditions for each problem or decision. It is a general method for structuring intricate or ill-defined problems and is built around three principles:

- The principle of constructing hierarchies
- The principle of establishing priorities
- The principle of logical consistency

The first principle involves constructing a hierarchy that incorporates the decision criteria or attributes associated with proposed capital investments. Building a hierarchy allows AHP to use a divide-and-conquer approach to help simplify otherwise complex sets of choices.

The second principle is to establish priorities, which is accomplished by making pairwise comparisons among different decision criteria at each level in the hierarchy and rating the relative importance of each criterion. When the pairwise comparisons are complete, the model uses those comparisons to calculate prioritization weights. Decision-makers or evaluators do not directly specify the weights themselves; rather, the model calculates the weights using decision-maker inputs.

Addressing the third principle, as part of the calculation, the model also produces a measure of evaluator consistency. Consider the classical decision paradox wherein an evaluator prefers A over B and B over C, but also prefers C over A. Logically, such a preference series is inconsistent. AHP measures and reports on this inconsistency ratio as a useful output to the evaluation panel.

By performing pairwise comparisons on the decision criteria, it is possible for the model to derive quantitative values (or weights) for the criteria and alternatives. The model derives priorities based on qualitative information from the experience and intuition of the raters, and tangible information including hard data. By incorporating both subjective judgments and hard data into the decision-making process, decision-makers are much more likely to arrive at a solution that is

acceptable to everyone. In particular, the multi-attribute decision model can help decision-making within VA:

- Incorporate quantitative information as well as knowledge, intuition, and experience
- Consider trade-offs among competing criteria
- Synthesize from the goal to determine the best alternatives
- Communicate the rationale for decisions to others
- Incorporate group judgments

The criteria and sub-criteria that could be used in running AHP can be numerous and extend across several levels in the hierarchy. However, to make the comparisons more manageable for the evaluators, it is necessary, at least initially, to limit the number of decision criteria at each level to six or fewer, as illustrated in Table 2, page 16.

### 3. Additional Level of Criteria

During the VA Capital Investment Panel “Lessons Learned Forum” held in December 1999, there were concerns that the Type and Volume components that affect Increase in New Customers, Increased Benefits, and Increase Access to Existing Customers were not well defined and did not capture the level of impact a proposal would have on the Department. As a result, Impact was added as an additional component and definitions were developed for each.

- **Type** refers to the category of customer that the proposed initiative would affect and is divided into internal customers (VA employees) and external customers (veterans, veteran families, service organizations, unions, volunteers, Congress, other Federal agencies, state and city governments, and local communities).
- **Volume** refers to the number of customers that the proposed initiative would affect and is divided into seven categories: One VA National, Multiple Administrations, Administration, Administrative Areas, Multiple Facilities, Facility Level, and Below Facility Level.
- **Impact** refers to the degree of intensity that the proposed initiative has on Customer Service and is defined as **high, medium, or low**. The level of impact upon the sub-criteria should be designated, with supporting rationale.

### 4. Ranking Investment Proposals

Before the Board uses the model to perform necessary calculations to determine the rankings for specific investment proposals, evaluators need to specify what

effect a particular proposal has with respect to each sub-criterion listed in Table 2, page 17.

The Application also contains instructions with emphasis on certain specific information, documentation, and completeness. The Data Validation Form is designed to verify that the necessary data have been provided. Incompleteness in the data should cause evaluators to downgrade their assessments for risk criteria and possibly reject the proposal completely.

Responses to the Application should contain specific quantitative data that the evaluators can use to assess the degree of projected outcome in terms of, for example, very significant effect, significant effect, some effect, or no effect. (Chapter IV-A contains several examples.) In judging the relative merits of proposals, evaluators may want to weigh possible project outcomes against the Department's performance targets that are submitted for the President's Budget and Congressional Budget. (See *Department of Veterans Affairs FY 2001 Budget Submission, Departmental Performance Plan, Volume 6 of 6.*)

The Capital Investment Board gives final approval to proposals, and then submits them to the VARB, who in turn forwards them to the Secretary. Upon approval from the Secretary, the proposals are incorporated into the VA Capital Plan, which is sent to OMB as part of VA's budget submission.

## F. DATA VALIDATION

In the past, capital investment proposals did not always meet the requirements of the Office of Management and Budget (OMB) especially in the areas of workload assumptions, performance measures, and the analytical comparison of alternatives. For this reason, the Data Validation Form was developed and will be used for all capital investment proposals reviewed by the VACIP during the Strategic Phase.

The first step in the application process at the VACIP is developing and using the Data Validation Form (Table 3, page 21). The second step is scoring the proposal using an AHP. The VACIP uses this two-step process to verify assumptions and validate data prior to the application of any strategic analytical tools used for evaluating and scoring the proposals. The validity assessment is intended to assist proposal teams and reviewers, at all levels, in developing sound business investments by:

- Ensuring the three Pesky Questions are answered
- Ensuring projected workloads can withstand external audit by verifying that the data and assumptions used are valid and reliable
- Providing comparable cost-effectiveness analysis for each alternative

- Linking each alternative to the Departmental and Administration or Staff Offices Strategic Plans by identifying objectives, performance measures, and anticipated outcomes
- Ensuring all viable alternatives are fully explored and compared against the chosen option

The Data Validation Form is divided into three sections. Sections 1 (3 Pesky Questions) and 2 (VA Architecture and VHA Workload Issues) are critical. If the proposal does not address the first two sections, it will not proceed to the third section where scores are applied. Each item in Section 3 corresponds to a specific section in the Capital Investment Proposal Criteria portion of the Application (Chapter IV-A). During the validity assessment, items in Section 3 are given a score (0, 1, or 2) to determine if the item is addressed, and whether the proposal team provided sufficient supporting data.

The VACIP sets the minimum model score and establishes the critical elements that must be fully addressed or the application will not pass. The critical elements in the validity are the Return on Taxpayer Investment and Strategic Alignment. A minimum score is needed to confirm that the proposals are substantially complete and are ready for VACIP review and evaluation. You must receive at least a “Good” scoring (2 points) for two of the sub-criteria. In addition, it is imperative that minimum scores are achieved for each section or the proposal will be returned to the originating office with a validity assessment that consists of comments and guidance on how to improve the proposal. A decision will be made on a case by case basis if missing information can be provided in time for the proposal to continue in the current review process or be postponed until the next review cycle.

Table 3: Standard Data Validation Form

Section1: Three Pesky Questions	Yes/No	Comments
1. Does the investment in a major capital asset support core/priority mission functions that need to be performed by the Federal Government? (Is more than one mission/goal identified?)		
2. Does the investment need to be undertaken by the requesting agency because no alternative private sector or government source can better support the function? (Is there a valid statement to support this? Is there any documentation of other alternatives?)		
3. Does the investment support work processes that have been simplified or otherwise redesigned to reduce costs, improve effectiveness, and make maximum use of commercial off-the-shelf technology?		

Section 2: VA IT Architecture (IT proposals only)	Yes/No	Comments
1. Does the project have CIO certification that it adheres to the IT architecture?		
VHA Workloads/Demographics (Projects: Construction, Lease, Enhanced-Use and Medical Equipment)	Yes/No	Comments
1. Did workload projections and assumptions pass technical review of Task Group?		

Task group to the Panel comprised of VHA representatives (10N, designated VISNs, 105, 17) and other panel members.

Section 3: Validity Scoring Table		
Score: 0=UNACCEPTABLE 1=ACCEPTABLE 2=GOOD		
	Score	Comments
1. Customer Service		(Max = 10 Min = 5)
1.1 Quality *		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
1.2 Waiting Time		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
1.3 Increase in New Customers		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
1.4 Increased Benefits		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
1.5 Increase Access to Existing Customers *		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
<b>Total Points</b>		<b>Pass Fail</b>
2. Return on Taxpayer Investment		(Max = 8 Min = 4)
2.1 Cost-Effectiveness Analysis *		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
2.2 Alternatives Analysis *		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		

\* Critical elements that must pass validity (a score of 1 or 2)

2.3 Cost Savings Analysis *		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
2.4 Non-Quantifiable Benefits		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
<b>Total Points</b>		<b>Pass    Fail</b>
<b>3. High Performing Workforce</b>		<b>(Max = 6    Min = 3)</b>
3.1 Recruitment and Retention		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
3.2 Training and Development		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
3.3 Employee Morale *		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
<b>Total Points</b>		<b>Pass    Fail</b>
<b>4. Risk</b>		<b>(Max = 6    Min = 3)</b>
4.1 Risk Score		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
4.2 Quality of Risk Analysis		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
4.3 Quality of Risk Control Plan *		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
<b>Total Points</b>		<b>Pass    Fail</b>
<b>5. Special Emphasis (VHA Construction only)</b>	<b>Yes/No</b>	<b>Comments</b>
At least 70% of project value		
<b>6. Seismic (VHA Construction only)</b>	<b>Yes/No</b>	<b>Comments</b>
At least 70% of project value		
<b>7. Strategic Alignment</b>		<b>(Max = 10    Min = 5)</b>
7.1 Quality of Life		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
7.2 Ensure Smooth Transition		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
7.3 Honor and Memorialize		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
7.4 Public Health and Socio-economic Well Being		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
7.5 One VA *		
a. Blank or not addressed = 0		
b. No effect or limited explanation = 1		
c. Justification with analysis = 2		
<b>Total Points</b>		<b>Pass    Fail</b>
<b>Total Validation Score</b>		<b>Pass    Fail</b>

\* Critical elements that must pass validity (a score of 1 or 2)



## G. APPLICATION PROCESS

It is critical that proposal writers follow the planning process identified in this *Guide* as well as the *OMB Capital Programming Guide*. The utilization of the planning process will result in better use of scarce resources and should decrease the risk of implementation difficulties. The process includes strategic and program performance linkage, baseline assessment and identification of the performance gap, functional requirements, and alternatives to capital assets. The proposal should investigate the opportunities available in the marketplace to satisfy project requirements. The availability, affordability, and cost-effectiveness of each alternative should be addressed.

This Application is not a replacement for a fully developed proposal (i.e., Design Program, etc.). Rather, this Application provides a standard format for summarizing information and improves the comparison and review process. It is expected that the summary information in the Application will provide an answer to the basic questions, but will also refer the reviewer to the specific sections or pages in the accompanying documentation. The accompanying documentation should include detailed information that supports all summary statements made in the Application – especially any estimates that the IPT develops. Data provided for each criterion should be concise and specific and provide as much information as possible that relates to the performance targets contained in the *Department of Veterans Affairs FY 2001 Budget Submission, Volume 6, Departmental Performance Plan*.

### Preparing the Application

The process consists of six steps. Each step must be completed before the next begins. The following steps summarize the Proposal Application submission process:

#### 1. Identify the Need

The first step in the Application process involves identifying the need for the proposal. All proposals must establish a need within the Department that the proposal fulfills. The minimum requirements are to provide baseline data and target demands in future years (which will vary according to the project category) thereby completing a gap analysis. To this end, the proposal Application requires that any proposals submitted for review meet the initial demand of the three pesky questions:

- Does the investment in a major capital asset support the core or priority mission functions of the Federal Government?
- Does the investment need to be undertaken by the requesting agency because no alternative private sector or government source can better support the function?

- Does the investment support work processes that have been simplified or otherwise redesigned to reduce costs, improve effectiveness, and make maximum use of commercial, off-the-shelf technology?

To successfully establish the need, proposal teams should complete a gap analysis. This analysis should be supported by the collection and analysis of relevant data sources. The team should utilize reliable data sources because this data will be used to establish the proposal need and support the final selection in later steps. A number of data sources are located throughout this *Guide* as well as in Chapter V, Attachment 3. The team should also review the VA Strategic Plan for guidance.

## 2. Identify Alternatives

Once the need has been established, the proposal team must identify viable proposal alternatives that fulfill the identified need. Proposal teams should identify as many alternatives as possible. They should then evaluate all of the alternatives and eliminate those that are non-viable.

*OMB Circular A-94* specifies alternatives that must be investigated. VA subscribes to this list and emphasizes that the minimal requirements necessary for submission to VACIB are the following:

*Information Technology* – At least six alternatives are possible, but a **minimum of 3 viable alternatives is necessary** to complete the alternatives analysis. One of the alternatives that must be addressed is **contract out** for the function. Other alternatives that may be considered are to buy commercial off-the-shelf (COTS), share, develop capability in-house, or develop architecture options for IT hardware initiatives. **Status quo** (continue with no change) must be provided for a comparative baseline. It may also be considered a viable alternative. **Leasing** must be addressed, in discussion only, if it is not considered a viable alternative.

*Infrastructure* – At least seven alternatives are possible, but a **minimum of 4 alternatives must be considered**, one of which must be the **status quo** to use as a comparative baseline. Two of the alternatives that must be investigated to address OMB concerns are **renovation** and **contract out**. The option of contracting out for services may include all of the services included in the scope of the application or any part or component in the scope of the investment proposal. It could also include contracting out other functions or services outside the scope in order to ‘make room’ or accommodate the proposed investment. There are four other alternatives that can be pursued by the investment proposal team: build, buy, lease, and share.

The following are types of questions OMB asks for major construction proposals:

- How does the request relate to VHA's strategic goals? The existing process is field driven, with the result being that a large portion of construction dollars go to the same medical centers year after year. Four of the six sites in last year's request have received at least one major construction project since FY 1993, and two have garnered 14.4% of all major construction dollars since then. This pattern doesn't make sense in a national system with 173, 100 of which haven't had any major construction funding in at least a decade.
- Are there more cost-effective options for new construction? A more thorough examination of contracting and other should be conducted before a decision to construct is made. In some cases (e.g., mental health), contracting will not be a feasible option, but there may be excess space within a medical facility that could be converted or renovated to meet the medical center's/network's need at a lower cost.

*Leases or GSA space assignments* – At least four other options need to be considered and some of them include: continue the current lease or space assignment, purchase an existing facility, build or renovate a facility on VA owned or purchased land.

Table 4 presents potential alternatives for the project categories and include, but are not limited to the following options:

**Table 4: Potential Alternatives**

Project Category	Renovate	Build	Buy	Lease	Status Quo (Baseline)	Share	Contract for Function	VA Developed Software	Total Options
Infrastructure	x	x	x	x	x	x	x		7
Lease		x	x		x	x	x		5
Non-Medical Equipment			x	x	x	x	x		5
Medical Equipment			x	x	x	x	x		5
IT			x	x	x	x	x	x	6
Enhanced-Use		x	x	x	x	x			5
ESA			x		x	x	x		4
ESPC	x	x	x		x		x		5

Alternatives in the table are for illustrative purposes and are not to be considered a complete list as Enhanced-Use, ESA, and ESPC have multiple options.

### 3. Evaluate Viable Alternatives

After selecting all of the viable alternatives, the proposal team should evaluate them against the Capital Investment Proposal Criteria (Chapter IV-A). An Alternatives Analysis template (Chapter IV-E) is provided for this purpose. The template is simply a guide to evaluate each alternative against the criteria determined by the Capital Investment Board.

<b>Alternatives Analysis Example</b>	<b>Status Quo</b>	<b>Contract</b>	<b>Renovate</b>	<b>Build</b>
<b>Criteria 1</b>				
<b>Criteria 2</b>				
<b>Criteria 3</b>				

Included in the Alternatives Analysis process, is the completion of a risk (Chapter IV-F) and cost-effectiveness (Chapter IV-D) analysis for each alternative. Completing these three analyses will lay the groundwork for a successful proposal application.

- Only *VHA Construction* proposals need to address the Seismic and Special Emphasis criterion (see Figure 1, page 8) in the Alternatives Analysis template.
- *Legacy System* proposals only need to complete the abridged Legacy System application (Chapter III, Part IV).

### 4. Select Proposed Alternative

Once the proposal team has completed the Alternatives Analysis, they should analyze the alternatives against one another and select the alternative that best meets the goals and mission of VA. This can be determined by evaluating each alternative based upon its relevance to the criteria and corresponding criteria weight (previously designated by the Board). The selected alternative will be submitted to and evaluated by the Capital Investment Board.

### 5. Complete the Application

Once the selected alternative has been determined, the proposal team needs to complete an Application for the selected alternative. This step involves completing the:

- Application (Chapter III, Part I),
- Capital Investment Proposal Criteria Template (Chapter III, Part II),
- Earned Value template (Chapter IV-G). To complete the Earned Value Template, a Project Plan must first be established. From the established Project Plan, budgeted % of work performed for each critical path milestone,

planned critical path milestone start and completion dates; budgeted dollars for work performed for each critical path milestone and project start and end dates.

All other templates and analysis are contained within the Capital Investment Proposal Criteria submission document. Please provide all supporting data sources and calculations with proposals.

- Only *VHA Construction* proposals need to address the Seismic and Special Emphasis criterion (see Figure 1, page 8). All others use Figure 3, page 10.
- IT proposals need to complete the IT Capital Investment Proposal Criteria (Chapter III, Part III) in addition to the standard application (Chapter III, Parts I & II).
- Legacy System proposals only need to complete the abridged Legacy System application (Chapter III, Part IV).

## 6. Submit Proposal Application

***Completed proposals are submitted to the Veterans Health Administration, Veterans Benefits Administration, National Cemetery Administration, and Staff Offices.*** They will review the documents and provide completed capital investment proposal packages to the Capital Budgeting and Oversight Service (041G) via their respective Investment Panel member. A complete proposal package, submitted to the Capital Budgeting and Oversight Service by the Administration, consists of:

- Capital Investment Application, all applicable sections (see Chapter III, Parts I-IV);
- Additional primary source documentation necessary to support data provided in the Application, including certification that a proposal is to be scored under the Seismic or the Special Emphasis criteria;
- Concurrence from appropriate Department-wide, category specific council, Franchise, or Administration board stating that a technical review has been completed and proposal meets technical requirements established by the Department; and
- Certification from the Deputy Under Secretary or equivalent stating that the proposal is an organizational priority.

Tables 5-7, on the following pages, contain proposal application checklists for Capital Investment Proposals, IT Investment proposals, and Legacy Systems proposals. Proposals are considered **incomplete** if the developers have not included all of the required information. Incomplete submissions will not be reviewed and will be returned to the submitting investment proposal team. Therefore, use the following checklists to ensure that all required information is included in the proposal application.

**Table 5: Capital Investment Proposal Application Checklist**

Completed	Required Information	Location in the Guide
	<b>Capital Investment Proposal General Information</b>	<b>Chapter III, Part I</b>
	<b>Contact Information</b>	
	<b>Proposal Information</b>	
	<b>Three Pesky Questions</b>	
	<b>Investment Size</b>	
	<b>Performance-Based Management</b>	
	<b>Special Requirements</b>	
	<b>Investment Proposal Criteria</b>	<b>Chapter III, Part II</b>
	<b>1. Customer Service</b>	
	1.1 Quality	
	1.2 Waiting Time	
	1.3 Increase in New Customers	
	1.4 Increased Benefits	
	1.5 Increase Access to Existing Customers	
	<b>2. Return on Taxpayer Investment</b>	
	2.1 Cost-Effectiveness Analysis	
	2.2 Alternatives Analysis	
	2.3 Cost Savings Analysis	
	2.4 Non-Quantifiable Benefits	
	<b>3. High Performing Workforce</b>	
	3.1 Recruitment and Retention	
	3.2 Training and Development	
	3.3 Employee Morale	
	<b>4. Risk</b>	
	4.1 Risk Score	
	4.2 Quality of Risk Analysis	
	4.3 Risk Control Plan	
	<b>5. Special Emphasis (VHA Construction Only)</b>	
	<b>6. Seismic (VHA Construction Only)</b>	
	<b>7. Strategic Alignment</b>	
	7.1 Quality of Life	
	7.2 Ensure Smooth Transition	
	7.3 Honor and Memorialize	
	7.4 Public Health/Socioeconomic Well Being	
	7.5 One VA	
	<b>Other Attachments:</b>	
	<b>Project Plan</b> (to include at a minimum CPM, Start/End Dates, Budgeted Work Performed and Budgeted Dollars)	
	<b>Earned Value Analysis</b>	<b>Chapter IV-G</b>
	<b>Supporting data, Surveys, Historical data, etc.</b>	

**Table 6: Information Technology Investment Proposal Application Checklist**

Completed	Required Information	Location in the Guide
	<b>Capital Investment Proposal Application Checklist</b>	<b>Use Table 5</b>
	<b>Information Technology Investment Proposal Criteria</b>	<b>Chapter III, Part III</b>
	<b>1. Mission</b>	
	1.1. Organizational Improvement	
	1.2. One VA Service	
	<b>2. IT Architecture</b> (provide written documentation of the proposal's adherence to VA's established performance principles, models, and standards from VA IT Architecture Team representative)	
	2.1. Standards	
	2.2. Interoperability	
	2.3. Security	
	<b>3. Project Management</b>	
	3.1. Acquisition Strategy	
	3.2. Project Structure	
	3.3. Technical Approach	
	<b>4. Customer Acceptance</b>	
	4.1. Experience with Technology Quality	
	4.2. Organizational Support	
	4.3. Ease of Use	
	<b>5. Minimizing Risk</b>	
	5.1. Technical	
	5.2. Schedule	
	5.3. Financial	

**Table 7: Legacy Systems Investment Proposal Application Checklist**

Completed	Required Information	Location in the Guide
	<b>Capital Proposal General Information</b>	<b>Chapter III, Part I</b>
	<b>Contact Information</b>	
	<b>Proposal Information</b>	
	<b>Investment Size</b>	
	<b>Legacy Systems Investment Proposal Criteria</b>	<b>Chapter III, Part IV</b>
	<b>1. Mission</b>	
	<b>2. Customer Service</b>	
	2.1 Quality	
	2.2 Waiting Time	
	2.3 Increase in New Customers	
	2.4 Increased Benefits	
	2.5 Increase Access to Existing Customers	
	<b>3. IT Architecture</b>	
	<b>4. Return on Taxpayer Investment</b>	
	4.1 Cost-Effectiveness Analysis	
	4.2 Alternatives Analysis	
	4.3 Cost Savings Analysis	
	4.4 Non-Quantifiable Benefits	
	<b>5. Risk Analysis</b>	



## H. EXECUTION PHASE AND PERFORMANCE MEASUREMENT

### Execution Phase

Once proposals have been approved and funded and the project is initiated, the Execution phase begins. During this step of the process, proposal teams evaluate project performance and submit quarterly progress reports to determine if schedules and costs are on target. Execution Reviews provide the Department an opportunity to revalidate the planning assumptions made over a year ago on capital projects that have already been selected for funding. Additional details on requirements for the execution phase will be released to project teams prior to quarterly due dates. Earned Value Analysis (see Chapter II-G) is a major component of this phase. However, the identification of performance measurements is also crucial to successful implementation of existing investments as well as decision-making on future investments.

### Overview of Performance Measurement

The Government Performance Results Act of 1993 requires each agency to submit to the Office of Management and Budget (OMB), beginning for fiscal year 1999, an annual performance plan. The plan is to contain the annual performance goals the agency will use to gauge its progress toward accomplishing its strategic goals and identify the performance measures the agency will use to assess its progress. Once established, a current baseline will be used to determine whether the acquisition is meeting Congressional policy to achieve at least 90 percent of cost, schedule, and performance goals. (OMB Circular A-11, Section 300) Performance measures can be defined as:

*The assessment of effectiveness and efficiency of an investment in support of the achievement of an organization's mission, goals, and quantitative objectives through the application of outcome-based, measurable, and quantifiable criteria, compared against an established baseline, to activities, operations, and processes.*

Performance measurement is the process whereby an organization establishes the parameters of performance within which programs, projects, and acquisitions are obtaining the desired results in support of mission goals. These parameters include:

- The “As-Is” or baseline condition, which is the performance level before initiating the project;
- The current level of performance achieved by the project effort;
- A benchmark, which is the level of performance observed from best practice studies;
- The “To-Be” or target for the desired level of performance, frequently based on benchmarks; and

- The threshold, which is the level of performance below which the project is no longer achieving acceptable results.

## Efficiency and Effectiveness

Performance should be evaluated using two criteria: effectiveness and efficiency. **Effectiveness** demonstrates that an organization is doing the right things, while **efficiency** demonstrates that an organization is doing things optimally. Some identifiers of each include:

Effectiveness	Efficiency
Has the organization achieved its missions and goals?	Do obligation rates match the annual budget?
Are end users of the products/services satisfied customers?	Was the project completed on time and on budget?
Was the work of high quality?	How much of the product/service was produced? How many FTEs were required?

## Developing Performance Measures

There are four major steps in developing project performance measures (the internal baseline):

### 1. Identify the project, its mission and objectives, the external, functional baseline, the benchmark, and the project target positions.

- What is the project name and who are the users and customers?
- What kind of project is it and what are the work efforts?
- What are the mission and objectives?
- What are the functional objectives?

### 2. Define baseline performance measures.

- What are the benefit measures (e.g., adaptability, communicability, process time, speed, turnaround, understandability)?
- What are the cost measures (e.g., number of investment dollars needed to reach a milestone or the investment required to perform a function)?
- What are the schedule measures (e.g., receipt of deliverables required, design reviews and sign-offs, achievement of initial project capability, completion of construction or installation)?

### **3. Validate feasibility of performance measures.**

- What data are necessary for calculation of the performance measure, when are the data collected, and who collects the data?
- How to verify and validate the results to ensure that they are accurate?
- What is the cost of data collection?

### **4. Finalize performance measurement baseline and define a methodology to track “external” project results.**

- Ensure set of performance measures determines the desired outcomes.
- Gain consensus for the performance measurement baseline.
- Establish data collection efforts to obtain periodic values of the measures in the baseline.

Earned Value Analysis (EVA) is one tool that can be used to track the progress of a project's schedule and budget. If the project experiences schedule overruns, then this will be reflected in the EVA. Consequently, the project manager can make decisions to correct the schedule as the problems arise. Utilizing tools like EVA will help control project costs and schedules and hedge against the same risks in future projects. (Chapter IV-G contains a guide and template for EVA)

Accurately identifying and tracking performance measures will increase control of project outcomes as well as improve overall project management. In addition, this process will improve future project selection by understanding what types of projects will positively impact the targeted performance goals.

## **Data Sources**

Data sources for VA performance measures can be found in:

- Department of Veterans Affairs Strategic Plan FY 2000-2005
- Administration Strategic Plans
- VA Departmental Performance Plan, Volume 6

### **III. CAPITAL INVESTMENT METHODOLOGY APPLICATION**

PART I. CAPITAL INVESTMENT PROPOSAL GENERAL INFORMATION		
<b>A</b>	<b>Project/Proposal Title:</b>	<b>Tracking Number:</b> (Assigned by CIO/VACIP)
<b>B</b>	<b>Submitting Office/Agency:</b> (e.g., VISN2, VHA, SDN3, VBA, VARO, NCA, etc.)	
<b>C</b>	<b>Project Manager and Contact Information</b>	
	<b>Name:</b>	
	<b>Telephone:</b>	
	<b>Fax Number:</b>	
	<b>Email Address:</b>	
	<b>Postal Address:</b>	
	<b>Proposal Information</b>	
<b>D</b>	<b>Date Submitted:</b>	
	Date Revised:	
<b>E</b>	<b>FY 2002 Budget Request (Estimate) and Out-Year Budget Projections:</b> (round to the nearest one hundred thousand)	
	\$ _____	
	Budget Request	
<b>F</b>	<b>Identify Capital Asset Type:</b> (Infrastructure, Medical Equipment, Non-Medical Equipment, Information Technology, Leases or GSA Space Assignments, Enhanced-Use Lease, Enhanced Sharing Agreements, ESPC)	
<b>G</b>	<b>Project Type:</b> (Identify the project as: Mission Critical, Crosscutting, Administrative, or R&D)	
<b>H</b>	<b>Project Description:</b> (Provide a brief summary statement of work to be accomplished)	
<b>I</b>	<b>Project Phase*:</b> (Identify phase as: Enhanced Services, New, Ongoing, or Operations & Maintenance)	

**\*Enhanced Services** – A project proposal that will augment or improve the product or the process, but not as the result of an existing pilot; **New** – A project that has had formal cost/benefits, alternatives, or requirements analyses completed; **Ongoing** – A project that has been awarded but has not been completely implemented (this includes pilots and prototypes deployment). On-going leases or GSA space assignments will be reviewed every five years; **Operational/Maintenance** – Systems that are completely implemented, which includes legacy systems. Assets or activities needed to sustain the asset and ensure it is operating at the optimal level of performance. These projects will be reviewed every three years unless scheduled for replacement within the three years.

J	<b>Location of Proposed Asset:</b>
K	<b>Scope:</b> Summarize the impact of the project on the organization. For example, <i>VA Medical Center</i> – Inpatient Units, Outpatient Clinics, Diagnostic Treatment Areas, etc; <i>VA Regional Office</i> – Adjudication, Vocational Rehabilitation, Loan Guaranty Services, the number of offices, etc; <i>Cemetery</i> – land acquisition, number of columbarium, in ground gravesites, administrative building renovation, interment sites, grave liners, etc.; <i>Infrastructure or IT projects</i> – number of users, work processes, transactions, replacement systems, etc.
L	<b>Project Goals and Objectives:</b> (Summarize expected improvements. Indicate if this project is being initiated because it corrects identified deficiencies (seismic, life-safety, JCAHO findings, IG, GAO, etc.) and/or is it required by law/court ruling, congressional or presidential directive. Provide the results of your baseline assessment and the resulting identification of the performance gaps. State how this initiative supports and incorporates the Department's Strategic Plan and the Administration's (VHA, VBA, NCA) or Staff Office's goals. Attach the relevant background material on the baseline assessment. See OMB's <i>Capital Programming Guide for baseline assessment information</i> .)
M	<b>Three Pesky Questions (Must be answered before proposal will be considered for review)</b>
M1	Does the investment in a major capital asset support core or priority mission functions that need to be performed by the Federal Government?
M2	Does the investment need to be undertaken by the requesting agency because no alternative private sector or government source can better support the function?
M3	Does the investment support work processes that have been simplified or otherwise redesigned to reduce costs, improve effectiveness, and make maximum use of commercial, off-the-shelf technology?
N	<b>Primary Customer(s):</b> (Internal – VA employees or External -- Veterans, family members and dependants of veterans, service organization, unions, volunteers, Congress, other federal agencies, state and city governments, and local communities.)

<b>O</b>	<b>Investment Size:</b> Provide investment information for at least the budget year plus four years in the two tables below. If the proposal is for an on going project then include two years prior to the budget year. If the acquisition takes longer than five years then the table should be completed for the number of years it will take to complete the acquisition.
<b>O1</b>	<p><b>Total Acquisition Cost:</b> The sum of total obligations for all non-recurring acquisition costs over the acquisition life of the asset or at least the budget year plus four, which ever is greater. Use the inflated dollars derived in the CEA Template (Chapter IV-D) to complete the table below. These are the actual dollars that you request to complete the project. Do not include operational or recurring costs. <i>Input information from selected alternative.</i></p> <p style="text-align: right;"><b>Total Acquisition Costs \$</b> _____</p>

Acquisition Costs							
	Previous Years Expenditures	2001	2002	2003	2004	2005	2006
<b>Construction Activities</b>							
Capital							
A/E Work							
Construction Contract							
<b>Equipment</b>							
Capital Purchases							
Non-Capital Purchases							
<b>Software</b>							
Capital Purchases							
Non-Capital Purchases							
<b>Services*</b> (Identify Type)							
<b>Support Services**</b> (Identify Type)							
<b>Supplies</b> (Identify Type)							
<b>Personnel and Compensation</b>							
<b>Intergovernmental Payments</b>							
<b>Intergovernmental Collections</b>							
<b>Total Acquisition Costs</b>							
<b>Acquisition Savings</b>							
<b>FTE Savings</b>							

\*Services are defined as any service, other than support services, performed or furnished by using equipment or software. Services include teleprocessing, local batch processing, electronic mail, voice mail, Centrex, cellular telephone, facsimile, and packet switching of data.

\*\*Support Services are defined as any commercial services, including maintenance, used in support of equipment, software, or services. Support services include source data entry, training, planning for the use and acquisition of information technology, studies (e.g., requirements analysis, alternatives analysis, and conversion studies), facilities management of government-furnished information technology, custom software development, system analysis and design, and computer performance evaluation and capacity management.

<b>O2</b>	<p><b>Total Recurring Cost:</b> Equals the sum of total obligations for maintenance and operations over the acquisition life of the asset or at least the budget year plus four which ever is greater. Use the inflated dollars derived in the CEA Template (Chapter IV-D) to complete the table below. These are the actual dollars that you request to complete the project.</p> <p style="text-align: right;"><b>Total Recurring Costs \$</b> _____</p>
-----------	--

Recurring Costs							
	Previous Years Expenditures	2001	2002	2003	2004	2005	2006
<b>Construction Activities</b>							
Capital							
A/E Work							
Construction Contract							
<b>Equipment</b>							
Capital Purchases							
Non-Capital Purchases							
<b>Software</b>							
Capital Purchases							
Non-Capital Purchases							
<b>Services*</b> (Identify Type)							
<b>Support Services**</b> (Identify Type)							
<b>Supplies</b> (Identify Type)							
<b>Personnel and Compensation</b>							
<b>Intergovernmental Payments</b>							
<b>Intergovernmental Collections</b>							
<b>Total Recurring Costs</b>							
<b>Recurring Savings</b>							
<b>FTE Savings</b>							

\*Services are defined as any service, other than support services, performed or furnished by using equipment or software. Services include teleprocessing, local batch processing, electronic mail, voice mail, Centrex, cellular telephone, facsimile, and packet switching of data.

\*\*Support Services are defined as any commercial services, including maintenance, used in support of equipment, software, or services. Support services include source data entry, training, planning for the use and acquisition of information technology, studies (e.g., requirements analysis, alternatives analysis, and conversion studies), facilities management of government-furnished information technology, custom software development, system analysis and design, and computer performance evaluation and capacity management.



O3	<p><b>Total Net Present Value (Life-Cycle Costs):</b> The total life cycle cost based on the economic investment life of the asset. The economic investment life of the asset should be identified. As defined in OMB's <i>Capital Programming Guide</i>, total life cycle costs are all direct and indirect initial costs, including planning and other costs or procurement; all periodic or continuing costs of operation and maintenance; and costs of decommissioning and disposal. Total life cycle costs should reflect franchise costs such as Austin Automation Center (AAC) operations and Integrated Data Communication Utility (IDCU) charges. <i>Use cost data from the CEA template(discounted worksheet) to complete the following table.</i></p> <p style="text-align: right;"><b>Total Net Present Value (Life-Cycle Costs) \$</b> _____</p>
----	---

	Proposed Project
Discount Rate Used:	
Current Workload:	
Projected Workload:	
Projected Workload Horizon (Years):	
Total Discounted Acquisition Cost:	
Total Discounted Recurring Cost:	
Total Discounted Life-Cycle Cost:	
Total Discounted Acquisition Savings:	
Total Discounted Recurring Savings:	
Total Discounted Life-Cycle Savings:	
Total Discounted Residual Value:	
Total Discounted Revenue Generated (if applicable):	
Total Net Present Value:	

P1	<p><b>Performance-Based Management:</b> Summarize the performance based management system plan to be used to monitor the achievement of, or deviation from, baseline goal, schedule, and cost projections (both acquisition and life-cycle of the capital asset). Indicate what corrective actions have been or will be taken if the cost or schedule estimate have a negative variance. Identify the variance factor (e.g., 10%), which will trigger these corrective actions and who will be responsible for executing the decision to implement the corrective measures. (Refer to OMB's <i>Capital Programming Guide</i>, pages 13 and 33)</p>
P2	<p><b>Project Plan:</b> (To include, at a minimum, overall project schedule, critical path milestones, budgeted work performed, budgeted expenditures, estimated start and end dates)</p>
P3	<p><b>Earned Value Analysis:</b> (See Earned Value Analysis Guide (Chapter IV-G) and corresponding template)</p>

Q	<b>Special Requirements (For All Investment Proposals) Category Specific</b>
<b>Q1</b>	<b>Workloads -- Infrastructure</b>
	Provide the current workload figures (e.g., beds, outpatient visits) and projected workload estimates for 2010, 2015, and 2020. Estimates for all future workload projections should take into account the most recent actual workload experience. A detailed rationale (including supporting documentation and analysis) should be provided for each capital investment proposal. The rationale for the projected workloads should, at a minimum, address the following issues: shift from inpatient to outpatient services; the role of current and future CBOCs; the reduction in length of stay (LOS) and bed days of care. Provide a sensitivity analysis on how well the project will meet the projected workloads for each of the projection years.
	Are out-year workload and population projections realistic and do they agree with overall Medical Care out-year workload and resource expectations? It is not feasible for some projects to assume that workload will steadily increase for 20 or more years into the future despite a locally decreasing population base. Nor is it reasonable to assume the inpatient utilization will remain steady far into the future despite evidence to the contrary.
	<b>Medical Equipment:</b> Use workload data for the past three years pertinent to the equipment being considered for purchase, e.g., studies, tests, procedures, diagnostic treatments, etc. and project workload out five and ten years which should be the equipment's useful life. If less than ten years, then primary source justification will need to be provided.
	<b>IT Workload:</b> Transactions, rewrite lines of code, telephone traffic, etc. Use workload data pertinent to IT investments.
<b>Q2</b>	<p><b>Population Basis:</b></p> <p>For Medical Facilities and Cemeteries: Provide an estimate for population supported for 2010, 2015, and 2020. Include Service-connected and other Category A populations to be served.</p> <p>For IT: Provide staff/clients served/supported by selected alternative. Provide data projected to FY 2005.</p>
<b>R</b>	<b>Other Attachments</b>
<b>R1</b>	<b>Primary Source Documentation:</b> (Provide any additional documentation that supports your application)

## **PART II. CAPITAL INVESTMENT PROPOSAL CRITERIA**

The Capital Investment Proposal Criteria contains 7 major criteria by which capital investment proposals will be judged. Within each major criterion are sub-criteria. Each proposal will be judge on its ability to meet the sub-criteria components listed below. This template is a form to guide the user through the Capital Investment Proposal Criteria. It should be completed with the most accurate data and supporting rationale available.

**Use the Capital Investment Proposal Criteria Guide (Chapter IV-A) to assist you in completing this template.**

### **Capital Investment Proposal Criteria Template**

#### **1. Customer Service**

- 1.1 Quality
- 1.2 Waiting Time
- 1.3 Increase in New Customers
- 1.4 Increased Benefits
- 1.5 Increase Access to Existing Customers

#### **2. Return on Taxpayer Investment**

- 2.1 Cost Effectiveness Analysis
- 2.2 Alternatives Analysis
- 2.3 Cost Savings Analysis
- 2.4 Non-Quantifiable Benefits

#### **3. High Performing Workforce**

- 3.1 Recruitment and Retention
- 3.2 Training and Development
- 3.3 Employee Morale

**4. Risk**

- 4.1 Risk Score
- 4.2 Quality of Risk Analysis
- 4.3 Quality of Risk Control Plan

**5. Special Emphasis (VHA Construction Only)****6. Seismic (VHA Construction Only)****7. Strategic Alignment**

- 7.1 Quality of Life
- 7.2 Ensure Smooth Transition
- 7.3 Honor and Memorialize
- 7.4 Public Health and Socioeconomic Well Being
- 7.5 One VA

### **PART III. INFORMATION TECHNOLOGY INVESTMENT PROPOSAL CRITERIA**

The Information Technology Capital Investment Proposal Criteria contains 5 major criteria by which information technology capital investment projects will be judged. Within each major criterion are sub-criteria. Each project proposal will be judge on its ability to meet the sub-criteria components listed below. This template is a form to guide the user through the Capital Investment Proposal Criteria. It should be completed with the most accurate data and supporting rationale available.

**This template must be completed in addition to the VA Capital Planning Process requirements of the Strategic Review Phase.**

**Use the Information Technology Capital Investment Proposal Criteria Guide (Chapter IV-B) to assist you in completing this template.**

#### **Information Technology Capital Investment Proposal Criteria Template**

##### **1. Mission (Weight: 0.455)**

1.1 Organizational Improvement

1.2 One VA Service

##### **2. IT Architecture (Weight: 0.187)**

2.1 Standards

2.2 Interoperability

2.3 Security

##### **3. Project Management (Weight: 0.107)**

3.1 Acquisition Strategy

3.2 Project Structure

3.3 Technical Approach

#### **4. Customer Acceptance (Weight: 0.154)**

- 4.1 Experience with Technology Quality
- 4.2 Organizational Support
- 4.3 Ease of Use

#### **5. Minimizing Risk (Weight: 0.096)**

- 5.1 Technical Risk
- 5.2 Schedule Risk
- 5.3 Financial Risk

## **PART IV. LEGACY SYSTEM PROPOSALS ONLY**

Legacy System proposals should address the sections within this chapter to meet the requirements of the capital investment planning process, as well as requirements under Clinger-Cohen. Please use the Legacy System Guide (Chapter IV-C) to complete this portion of the application. Proposal applications should also contain the information requested in Chapter III, Part I of the Capital Investment Proposal Application.

Please note: All statements and assumptions should be supported by data calculations and documentation. Please attach all supporting documentation as appendices to the proposal.

### **1. Mission**

### **2. Customer Service**

2.1 Quality

2.2 Waiting Time

2.3 Increase in Customers

2.4 Increased Benefits

2.5 Increase Access to Existing Customers

### **3. IT Architecture**

### **4. Return on Taxpayer Investment**

4.1 Cost-Effectiveness Analysis

4.2 Alternatives Analysis

4.3 Cost Savings Analysis

4.4 Non-Quantifiable Benefits

### **5. Risk Analysis**

## **IV. APPLICATION GUIDES**

Please note that the following guides are intended to assist proposal teams in developing responses to the application, especially those areas that have been updated recently.



## A. CAPITAL INVESTMENT PROPOSAL CRITERIA GUIDE

This document includes descriptions, examples, and potential data sources for each of the criteria that need to be addressed in Part II of the proposal application. The answers to the criteria section of the proposal should be supported by the templates in Chapter IV and all relevant data and documentation (such as, surveys, industry analysis, primary source documentation, etc.) that the proposal team will research and assemble.

In this document, there are examples given for each criterion. These examples indicate the suggested data type and information that are useful in evaluating proposals. They are by no means the only acceptable responses. They merely serve as content suggestions. The ratings noted are only used during the validity assessment.

### 1. Customer Service

Serving our nation's veterans is a fundamental part of the VA function. The Department exists to give meaning, purpose, and reality to America's commitment to her veterans. Customer service is a vital part of this function. The goal of VA is to be the very best in the marketplace, because it is what our veterans deserve. Superior customer service is valued on five criteria: Quality, Waiting Time, Increase in New Customers, Increased Benefits, and Increase Access to Existing Customers. Together, these create a comprehensive value of the way our country's veterans are serviced by our great nation.

#### 1.1 Quality

Quality refers to the measure of the improvement in the performance of customer service that the initiative provides to the customer. This criterion is a measure of the enhancement of service above and beyond the current baseline.

For this criterion, a "good" answer:

- Identifies the baseline that is used for comparison;
- Addresses **how** the initiative enhances customer service quality;
- Details **how much** of an impact the initiative will have upon customer service quality.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not have any impact on quality of service, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

Adding an additional parking structure will increase productivity, which in turn will increase quality of service to our customers. Patients have complained that the unavailability of parking spaces has prevented them from making their appointments. Further, doctors have also complained that they have had to cancel or delay appointments due to inadequate parking. The facility has the space and the need for a parking structure. This will tremendously improve upon the quality of service that the facility is able to provide by avoiding parking gridlock.

**Good:** Good responses are those that provide some kind of analysis to support the basic response. A good response would be:

Adding an additional parking structure will increase quality of customer service. An independent contractor conducts Customer Satisfaction Surveys on a quarterly basis among outpatients VISN-wide. (Customer satisfaction is an indicator of service quality). Tab 8-1 through Tab 8-3 show results of a recent survey of 837 outpatients at a VAMC facility and remote clinics. They attained a creditable overall mean score of 79.5%, but parking only rated a 42.8%. On quarterly patient satisfaction surveys, the two lowest scores have consistently been “convenience of parking” and “waiting time.” This fall-off in quality is a result of the continual increase in workload while physical facilities remain fixed. Addition of this capital asset (improved patient parking) should vastly improve this quality measure.

Quality of service will be improved because patients can arrive for clinical appointments on time. The current waiting time situation is adversely impacted by the unavailability of parking spaces. Patients’ appointment schedules, as well as those of healthcare providers, are subject to the mercy of parking availability. 25% of the complaint were lodged by physicians who had difficulty obtaining a parking space, had to cancel or delay appointments. The impact was reduced patient/caregiver contact time and consultant availability.

**Possible Data Source:**

- Most recent Department of Veterans Affairs Congressional Budget Submission, Performance Volume 6.
- Satisfaction Surveys-National Customer Feedback Center.

## **1.2 Waiting Time**

Waiting time refers to a measure of the reduction in wait time per customer(s) serviced. This criterion is a measure of the reduction in wait time above and beyond the current baseline.

For this criterion, a “good” answer:

- Identifies the baseline that is used for comparison;
- Addresses **how** the initiative reduces wait time per customer;
- Details **how much** of an impact the initiative will have upon wait time.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not have any impact on waiting time, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

The investment will introduce a computer-based hospital kiosk registration system that is anticipated to reduce waiting time tremendously. Customers will enter the hospital facility, and register themselves at one of five computer-operated kiosks.

It is estimated that one kiosk per 10 customer appointments per hour is a reasonable ratio. This system will reduce customer registration wait time for customers who will register through the kiosk system. This system reduces the number of person-to-person registrations and allows more time for the more complicated activities, which currently serve as a bottleneck to the system.

**Good:** Good responses are those that provide some kind of analysis to support the basic response. A good response would be:

The investment will introduce a computer-based hospital kiosk registration system that is anticipated to reduce waiting time by 62%. Customers will enter the hospital facility, and register themselves at one of five computer-operated kiosks.

Recent VA customer service surveys indicate that customers are very dissatisfied with their initial waiting time to register when entering a hospital. 38% of those surveyed indicated that they had experienced a wait to register, which exceeded 45 minutes. Of those surveyed, 81% thought the wait was unreasonable and 60% indicated that it may deter them from seeking VA services in the future.

Internally, staff has indicated that high customer wait times were directly resulting from complicated registrations, which involved increased paperwork and other activities. They believed that 3 complicated customer registrations per hour resulted in an overall increase of 15 minutes per customer.

It is estimated that one kiosk per 10 customer appointments per hour is a reasonable ratio. This system will reduce customer wait time for registration by 62%, which is based upon the assumption that most customers will register through the kiosk system. This system reduces the person-to-person registrations and allows more time for the more complicated activities, which currently serve as a bottleneck to the system.

**Possible Data Source:**

- Local Facility, Historical Data

- Clinic Schedules (day and hour, time between appointments)

### 1.3 Increase in New Customers Served

Increase in new customers served refers to the specific number of new customers serviced, above and beyond the current baseline, as a result of the implementation of the initiative.

For this criterion, a “good” answer:

- Identifies the baseline used for comparison;
- Identifies target performance;
- Addresses **how** the initiative will increase the number of new customers;
- Details **how much** of an impact the initiative will have upon the number of new customers above and beyond the current baseline;
- Identifies the type, volume, and impact that is used for comparison.

Note: Please define type, volume and impact as follows:

#### Type:

The type of customers serviced is broken down into two categories, **internal** and **external**. Internal customers are VA employees. External customers include: veterans, veteran family members or dependents, service organization, unions, volunteers, Congress, other federal agencies, state and city governments and local communities.

#### Volume:

The volume of customers serviced is broken down into seven categories. They are as follows:

- **One VA National:** Customers located across the total VA spectrum.
- **Multiple Administrations:** Any combination of two or more Administrations that jointly service the customer.
- **Administration:** VBA, VHA, NCA, and Staff Offices- Customers located across one entire Administration.
- **Administrative Areas:** VISN (VHA), SDN (VBA), Regional (NCA), or VACO (Staff Offices)- Customers are located across one administrative area.
- **Multiple Facility:** Customers are serviced by more than one facility
- **Facility Level:** Customers are serviced by one major facility.
- **Below Facility Level:** Customers are serviced by a sub-unit of a facility.

#### Impact:

The impact upon customer service is defined as **high, medium, or low**. The level of impact upon the sub-criteria should be designated, with a supporting rationale.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not increase customers, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

This investment will expand the current capacity from 120,000 patient stops per year to 375,000 stops per year. In this case, the project impacts external customers, at multiple facilities. We believe the impact to be high, due to the significant number of patient stops, and the type of patient assistance.

**Good:** Good responses are those that provide some kind of analysis to support the basic response. The analysis might support the idea that the proposal will succeed, but might additionally help establish that patient demand justifies the investment. A good response would be:

This investment will expand the current capacity from 120,000 patient stops per year to 375,000 stops per year. Currently, patients must schedule appointments 4 to 8 weeks in advance. Many decline, saying they do not want to wait that long. Urgent cases often are referred to non-VA providers. In 1996, 123,000 urgent cases—involving cardiac and cancer patients—were referred to outside providers. By more than tripling the capacity of this facility, urgent cases can be scheduled as needed, and less urgent cases can be scheduled with less lead time, reducing the number of veterans required to go elsewhere for treatment.

In this case, the types of patient that will be served by the investment are external. We will be impacting multiple facilities because of the increased ability to take in patients internally, as well as from other near-by facilities. Therefore, we believe the impact of this expansion to be high, due to the number of patients affected, and their inability to receive similar assistance elsewhere.

**Possible Data Sources:**

- 3-year Trend Analysis
- Market Analysis of healthcare catchment area
- Fee Basis

**1.4 Increased Benefits**

Increased benefits refers to the increase in customer benefits, programs and services, previously not provided under current law to new or existing customers. This criterion is a measure of the increase in benefits above and beyond the current baseline.

For this criterion, a “good” answer:

- Identifies the baseline used for comparison;

- Addresses **how** customer benefits are increased;
- Details **how much** of an impact the initiative will have upon increased customer benefits;
- Identifies the type, volume and impact of the customers affected.

Note: Please define type, volume and impact as follows:

Type:

The type of customers serviced is broken down into two categories, **internal** and **external**. Internal customers are VA employees. External customers include: veterans, veteran family members or dependents, service organization, unions, volunteers, Congress, other federal agencies, state and city governments and local communities.

Volume:

The volume of customers serviced is broken down into seven categories. They are as follows:

- **One VA National:** Customers located across the total VA spectrum.
- **Multiple Administrations:** Any combination of two or more Administrations that jointly service the customer.
- **Administration:** VBA, VHA, NCA, and Staff Offices- Customers located across one entire Administration.
- **Administrative Areas:** VISN (VHA), SDN (VBA), Regional (NCA), or VACO (Staff Offices)- Customers are located across one administrative area.
- **Multiple Facility:** Customers are serviced by more than one facility
- **Facility Level:** Customers are serviced by one major facility.
- **Below Facility Level:** Customers are serviced by a sub-unit of a facility.

Impact:

The impact upon customer service is defined as **high, medium, or low**. The level of impact upon the sub-criteria should be designated, with a supporting rationale.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not provide any new benefits or services, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

This investment establishes a VA care unit designed to identify and treat the “Gulf War Syndrome.” At present, veterans receive scattered services from a variety of VA and non-VA facilities, and often are referred for psychiatric treatment by skeptical providers.

This investment will service external customers at a Administrative Area level. The impact is expected to be at a high level.

**Good:** Good responses are those that provide some kind of analysis to support the basic response. The analysis might support the projected increase in customers, but might additionally help establish the need for the new service or benefit. A good response would be:

This investment establishes a VA care unit designed to identify and treat the "Gulf War Syndrome." At present, veterans receive scattered services from a variety of VA and non-VA facilities, and often are referred for psychiatric treatment by skeptical providers. Data shows a steady and growing number of veterans who are seeking treatment for Gulf War-related conditions. In this geographical area, the numbers seeking treatment increased by 15% in 1991, 17% in 1992, and 16% in 1993 through 1996.

The investment will impact external customers at a Administrative Area level, because, once established, it will be the only facility of its kind within an entire VISN. For this reason, we believe the impact to be at a high level.

**Possible Data Source:**

- New Legislation

### **1.5 Increase Access to Existing Customers**

Increase in existing customer access refers to the increase in customer access to existing users of the system made available as a result of the initiative implementation. This criterion is a measure of the increase in existing customer access above and beyond the current baseline.

For this criterion, a "good" answer:

- Identifies the baseline used for comparison;
- Addresses **how** the initiative will increase in existing customer access;
- Details **how much** of an impact the initiative will have upon customer access;
- Identifies the type, volume, and impact of customers affected.

Note: Please define type, volume and impact as follows:

Type:

The type of customers serviced is broken down into two categories, **internal** and **external**. Internal customers are VA employees. External customers include: veterans, veteran family members or dependents, service organization, unions, volunteers, Congress, other federal agencies, state and city governments and local communities.

Volume:

The volume of customers serviced is broken down into seven categories. They are as follows:

- **One VA National:** Customers located across the total VA spectrum.

- **Multiple Administrations:** Any combination of two or more Administrations that jointly service the customer.
- **Administration:** VBA, VHA, NCA, and Staff Offices- Customers located across one entire Administration.
- **Administrative Areas:** VISN (VHA), SDN (VBA), Regional (NCA), or VACO (Staff Offices)- Customers are located across one administrative area.
- **Multiple Facility:** Customers are serviced by more than one facility
- **Facility Level:** Customers are serviced by one major facility.
- **Below Facility Level:** Customers are serviced by a sub-unit of a facility.

Impact:

The impact upon customer service is defined as **high, medium, or low**. The level of impact upon the sub-criteria should be designated, with a supporting rationale.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not have any impact on customer access, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

This project will consolidate primary and managed care activities and services, which currently are spread over various floors in different buildings, thus improving access to existing customers.

This project will impact external customers at the facility level. The investment impact will be medium.

**Good:** Good responses must provide some kind of analysis supporting the basic response. The following is an example of a good response:

This project will consolidate primary and managed care activities and services, which currently are spread over various floors in different buildings, thus improving access to existing customers.

Similar improvements were made at this VAMC in 1990. A National Customer Feedback Center survey showed a decline in customer satisfaction prior to 1990 and steady gains following 1990. Between 1985 and 1989, customers reporting that the center was "Accessible" or "Very Accessible" fell from 43% to 25%. Between 1990 and 1996, customers reporting "Accessible" or "Very Accessible" increased from 30% to 62%. As a result, additional improvements are expected to further increase customer accessibility.



The project will impact external customers at this particular facility. As a result, the impact of the project is medium, due to the fact that it impacts only one facility, without making innovative changes that can be replicated by other facilities.

## 2. Return on Taxpayer Investment

The taxpayers of this country expect their hard-earned dollars be spent only after extensive and thoughtful consideration. To honor this commitment, VA only evaluates proposals, which have undergone thorough analysis. This analysis includes: Cost-Effectiveness Analysis, Alternatives Analysis, Cost Savings Analysis, and Non-quantifiable Benefits Analysis. Together, the use of these criteria demonstrates our management of scarce resources to obtain optimal value and performance to serve the veteran.

### 2.1 Cost Effectiveness Analysis

Cost-effectiveness analysis is the estimated cost assessment of both the initiative and the alternatives used to evaluate the options.

For this criterion, a “good” answer:

- Identifies baseline (status quo) used for comparison;
- Provides a completed cost-effectiveness analysis, with supporting data and calculations, (reviewers must be able to be replicate the calculations);
- Utilizes the **CEA template** and attaches **CEA summary sheet**.
- Provides justification for the selected option, especially if IPT does not select the most cost-effective alternative.

**Unacceptable:** Unacceptable responses include those that are left blank or do not complete the CEA template.

**Acceptable:** Acceptable responses include a completed “cost effectiveness analysis” template supported by data **estimates** and calculations attachments.

**Good:** Good responses are those which provide **justifiable and conclusive figures with supporting data** and calculations attached. Good responses utilize the cost-effectiveness template. (See Chapter IV-D)

#### **Possible Data Source:**

- Cost Effectiveness Analysis Guide (Chapter IV-D)
- Existing Financial Reports.

### 2.2 Alternatives Analysis

Alternatives analysis is the comprehensive assessment of all the available proposal alternatives relative to the Investment Proposal Criteria.

For this criterion, a “good” answer:

- Provides a completed alternatives analysis, with all necessary supporting data and calculations;
- Utilizes and provides the ***alternatives analysis template***, as well as the corresponding summary.
- Provides primary source documentation
- Each alternative will be compared to each sub criteria

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions, or do not use the template.

**Acceptable:** For each criterion listed in the alternatives analysis template, acceptable responses include:

- those that indicate that the proposal will not have any impact, with supporting rationale; and
- use the template which addresses only the major criteria;
- Or-
- might include, but is limited to major criteria, as in the following:

Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4
High Performing Workforce	• Low	• Medium	• None	• Medium
Customer Service	• Addresses	• Does not address	• Addresses	• Does not address

**Good:** Good responses describe how the alternative will impact each criterion and sub-criterion in the alternatives analysis matrix and provide data to support conclusions. Good answers utilize the Alternatives Analysis template and each alternative will be compared to each sub-criterion. (See Chapter IV-E) The following is a partial example of a good response:

Alternative 1, VBA “Build to Suit” Lease, is the best option for satisfying VA’s customer service objectives. VBA Phoenix receives a modern leased facility through VA leasing with all of the benefits of a GSA lease at 5 percent savings. Relocation into a new “build to suit” leased building offers the following advantages:

- Better environment for IT
- VA image is improved
- Customer access is improved
- Effective Organizational alignment
- Least costly alternative

	<b>Alternative 1 VA Lease Procurement</b>	<b>Alternative 2 GSA Lease Procurement</b>	<b>Alternative 3 Supplemental Lease</b>	<b>Alternative 4 Forced Move Lease</b>
<b>Quality</b>	<ul style="list-style-type: none"> <li>▪ Better training facilities</li> <li>▪ BPR initiatives of Service and Loan Centers</li> <li>▪ Improved resources</li> </ul>	<ul style="list-style-type: none"> <li>▪ Better training facilities</li> <li>▪ BPR initiatives of Service and Loan Centers</li> <li>▪ Improved resources</li> </ul>	<ul style="list-style-type: none"> <li>▪ Split operations</li> <li>▪ Small site footprint</li> <li>▪ Costly alternative with huge up front expense</li> </ul>	<ul style="list-style-type: none"> <li>▪ High disruptive</li> <li>▪ Small site footprint</li> <li>▪ Costly alternative with huge up front expense</li> </ul>
<b>Waiting Time</b>	<ul style="list-style-type: none"> <li>▪ Waiting time will decrease due to efficiencies gained from a state-of-the-art facility</li> </ul>	<ul style="list-style-type: none"> <li>▪ Waiting time will decrease due to efficiencies gained from a state-of-the-art facility</li> </ul>	<ul style="list-style-type: none"> <li>▪ Waiting time will not improve as significantly due to small building footprint</li> <li>▪ Split operations hinder timeliness</li> </ul>	<ul style="list-style-type: none"> <li>▪ Waiting time will not improve as significantly due to small building footprint that diminishes layout efficiencies</li> </ul>
<b>Increase in New Customers</b>	<ul style="list-style-type: none"> <li>▪ Customers will be drawn to a 'user friendly' facility that is accessible</li> </ul>	<ul style="list-style-type: none"> <li>▪ Customers will be drawn to a 'user friendly' facility that is accessible</li> </ul>	<ul style="list-style-type: none"> <li>▪ Small building footprint is not conducive for a customer friendly setting</li> <li>▪ Split operations frustrate customers</li> </ul>	<ul style="list-style-type: none"> <li>▪ Small building footprint is not conducive for a customer friendly setting</li> </ul>
<b>Increased Benefits</b>	<ul style="list-style-type: none"> <li>▪ Improved facility leads to better service</li> <li>▪ Better trained employees lead to more accurate claims</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improved facility leads to better service</li> <li>▪ Better trained employees lead to more accurate claims</li> </ul>	<ul style="list-style-type: none"> <li>▪ Small building footprint limits service gains due to inefficient layout and adjacencies</li> <li>▪ Split operations is inefficient</li> </ul>	<ul style="list-style-type: none"> <li>▪ Small building footprint limits service gains due to inefficient layout and adjacencies</li> </ul>
<b>Increase Access to Existing Customers</b>	<ul style="list-style-type: none"> <li>▪ Handicapped accessibility issues are resolved</li> <li>▪ Highly visible facility</li> <li>▪ Adequate customer parking</li> </ul>	<ul style="list-style-type: none"> <li>▪ Handicapped accessibility issues are resolved</li> <li>▪ Highly visible facility</li> <li>▪ Adequate customer parking</li> </ul>	<ul style="list-style-type: none"> <li>▪ Handicapped accessibility issues are resolved</li> <li>▪ Small site footprint leads to increased security risk</li> <li>▪ Split operations limits access</li> </ul>	<ul style="list-style-type: none"> <li>▪ Handicapped accessibility issues are resolved</li> <li>▪ Small site footprint leads to increased security risk</li> </ul>
<b>Etc.</b>	<ul style="list-style-type: none"> <li>▪</li> </ul>	<ul style="list-style-type: none"> <li>▪</li> </ul>	<ul style="list-style-type: none"> <li>▪</li> </ul>	<ul style="list-style-type: none"> <li>▪</li> </ul>

**Possible Data Source:**

- Documentation from external agencies or corporations demonstrating an attempt was made to contract for services.
- Letters of support from other Administrations for implementation to include FTE and Funds.

**2.3 Cost Savings Analysis**

Cost savings analysis is the *quantitative* assessment of the cost savings of all initiatives and the alternatives. This is a best attempt to quantify the net savings to the institution if the initiative were implemented.

For this criterion, a “good” answer:

- Includes the baseline data of existing costs;
- Provides a complete analysis of all potential cost savings derived from the implementation of the initiative.
- Includes data source attachment and justification for cost savings figures.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not have any cost savings, with supporting rationale;  
-Or-
- include a complete cost savings analysis supported by data estimates and calculations attachments.

The project will result in cost savings of \$1 million. The savings is as a result of the reduction in materials cost, increase in staff efficiency and storage space cost savings, which result from the implementation of the new paperless office system.

**Good:** Good responses are those which provide justifiable and conclusive data with supporting primary source documentation and calculations attached.

We predict that the implementation of this new paperless office system will result in a cost savings of over \$1.7 million. This sum was derived from the following assumptions:

Cost Savings	Value of Cost Savings	Justification
Reduction in Material Costs	Recurring cost savings: \$500,000 per year  Baseline costs: \$2 million per year	The paperless office will provide data warehousing that will reduce paper and material purchases by 70%. <i>Any-agency</i> implemented a similar system receiving similar results during FY 1999.
Increase Staff Efficiency	Recurring cost savings: \$1 million per year  Baseline costs: \$3 million per year	The project will create increased staff efficiency resulting from the reduction in copying, filing and other labor costs, reducing overtime. <i>Any-agency</i> saw the same proportionate level of reductions in a similar project.
Storage Space Cost Savings	Recurring cost savings: \$200,000 per year  Baseline costs: \$200,000 of storage rental	Currently, there is little space available for new files. The administration would require new storage space during FY 2002, to proceed with the status quo.

**Possible Data Sources:**

- For VHA: [www.klfmenu.med.va.gov](http://www.klfmenu.med.va.gov) (Cost Data)
- The cost savings analysis is a part of the cost-effectiveness template (Chapter IV-D). Use the CEA template to derive the information for this section.

**2.4 Non-Quantifiable Benefits**

Non-quantifiable benefits include those benefits or services, which are qualitative benefits resulting from the implementation of the initiative. These are benefits that do not have established values and can not be quantified. However, with additional research these may be quantified in future years.

For this criterion, a “good” answer:

- Includes a description of the benefit;
- Details how much of an impact the initiative will have upon the non-customer benefits.

Note: In accordance with OMB Circular A-94, this component is included to capture benefits that are not presently quantified. (OMB Circular A-94, Section 6.a)

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not have any impact on internal non-customer benefits, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

The project will result in a variety of non-quantifiable benefits. Benefits include: on-line application process, on-line enrollment/disenrollment, more timely response to transactions and faster processing of payments.

**Good:** Good responses must provide justification supporting the lack of available data and figures. The following is an example of a good response:

This project will result in a myriad of non-quantifiable benefits. These benefits include:

Benefit	Justification
High Performing Work Force: On-line application process	The results of VAROs of a similar system has resulted in a significantly more efficient workforce. However, because the system has recently been introduced, it has yet to compile productivity measures. The benefit from this initiative is currently derived from observational documentation.
High Performing Work Force: On-line enrollment/disenrollment	The ability for customers to utilize the on-line enrollment/disenrollment system will decrease the overall staff time dedicated to this customer service. Currently, all enrollment and disenrollment occur via telephone. Many agencies have introduced on-line systems that have decreased the demand for repetitious input by telephone operators. This system will give them more freedom to effectively allocate their time to items, which require necessary contact with operators.
Waiting time: More timely response to transactions and faster processing of payments.	The faster transactions are processed, the sooner payments will occur. Increasing processing by an estimated 5 days will significantly increase the reimbursement process. This is a new concept that has not been tried in government settings. Therefore, there are no comparable government figures.

### 3. High Performing Workforce

The VA's core values include excellence in service, programs, and people. Part of this value is the VA's commitment to performing at the highest level of competence and creating a culture where everyone is accountable, respected and appreciated. To maintain this value, proposals are evaluated on their ability to contribute to a high performing workforce, which is comprised of: Recruitment and Retention, Training and Development, and Employee Morale. Together we can make VA the employer of choice.

#### 3.1 Recruitment and Retention

Recruitment and retention refers to the initiative's ability to recruit and retain the best employees available. This criterion is a measure of the increase in recruitment and retention above and beyond the current baseline or a decrease in employee turnover ratio.

For this criterion, a "good" answer:

- Identifies the baseline used for comparison;
- Addresses **how** the initiative will increase recruitment and retention of the workforce;
- Details **how much** of an impact the initiative will have on the recruitment and retention of VA employees.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not affect recruitment or retention, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

This investment will create a Virtual Private Network (VPN) system with laptop computers to allow remote system access for administrators and staff. This system will allow employees to work remotely from their homes, airplanes, etc. It will provide greater employee access, while increasing efficiency. This system will give employees increased access, flexibility, thereby assisting in employee retention and efficiency.

Staff has indicated that this system will also build employee's skills set, by teaching them to use technology that is in standard use with private business. Additionally, by increasing employee efficiency, employee satisfaction increases

**Good:** Good responses must go further in justifying statements about recruitment retention (decrease in turnover ratio or vacancy rates for unfilled positions), which often includes conducting surveys and providing analysis of the responses. The following is an example of a good response:

This proposal will create a Virtual Private Network (VPN) system with laptop computers to allow remote system access for administrators and staff. This system will allow employees to work remotely from their homes, airplanes, etc. It will provide greater employee access, while increasing efficiency. This has been shown to assist with employee retention.

Internal staff surveys indicate that work flexibility is a priority. 83% of those surveyed indicated that they want the ability to work from home during instances of child illness, inclement weather and late at night. Other responses included the ability to work from hotel rooms and to access work-related e-mails and documents while on the road.

Staff has indicated that this system will build employee's skills set, by teaching them to use technology that is in standard use in private business. In preliminary studies, 65% of new college graduates indicated that they believed this type of system was standard among potential employers. Further, a VPN will allow the staff to become more efficient, which will increase employee and employer satisfaction.

**Possible Data Source:**

- Personnel Records: Turnover Rates, Vacancy Duration, Clinical and Skilled Professionals; Administrative and Clerical Support Functions.

**3.2 Training and Development**

Training and development refers to the ability of the initiative to enhance skills, provide knowledge management, and succession planning to contribute to the training and development goals of the agency. It also includes initiatives that expand the career development ladder for staff.

For this criterion, a “good” answer:

- Identifies the baseline used for comparison;
- Addresses **how** the initiative will increase training and development of the workforce;
- Details **how much** of an impact the initiative will have upon the training and development of VA employees.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal is not related to training and development, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

This investment expands current VARO facilities to provide a computer lab for training employees in using software.

**Good:** Good responses must provide a more comprehensive analysis. For example:

This VBA investment expands current facilities to provide a computer lab for training VARO employees in using COTS software. The facility provides space for classes of 20 and will permit ongoing basic, intermediate, and advanced training for the entire staff of 3,500 professional and support staff. Assuming five one-hour courses per day and 260 business days per year, the facility provides 26,000 person training hours per year. This will enable us to provide an average of 74 hours of training per employee during the year. This will ensure more consistency in documents as well as more timely migration to software upgrades.

**Possible Data Source:**

- Personnel Records



### **3.3 Employee Morale**

Employee morale refers to the ability of the initiative to increase employee morale. This criterion is a measure of the increase in employee morale above and beyond the current baseline.

For this criterion, a “good” answer:

- Identifies the baseline used for comparison;
- Addresses **how** the initiative will increase employee morale among the workforce;
- Details **how much** of an impact the initiative will have upon VA employee morale.

Note: Include employee surveys, exit interviews, etc.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal is not designed to have a direct impact upon morale, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

The new parking facility in this VAMC will provide indoor heated parking for the 375 employees. This parking is physically attached to the Center and will not require walking outside to get from the Center to the parking garage. This is expected to improve employee morale, especially during the winter.

**Good:** Good responses are those that provide additional information demonstrating a link between morale and the asset:

In 1998, 25 employees were injured due to slipping on ice while walking between the outside parking lot and the VAMC building. The new parking facility will provide indoor heated parking for 800 cars; providing ample parking for the Center's 375 employees as well as for patients. In customer and employee satisfaction surveys conducted in 1998, dissatisfaction with parking was identified by 70% of the respondents. The new parking facility is physically attached to the Center and will not require walking outside to go between the Center and the parking garage. This is expected to improve employee morale as well as customer satisfaction, especially during the winter.

**Possible Data Source:**

- Employee Surveys
- Exit interviews

## 4. Risk

Risk is an inherent part of any capital investment. However, project risk can be reduced or eliminated by identifying consequences that can negatively impact a project's success. In this case, risk can be analyzed in six components: Financial, Technical, Operational, Schedule, Legal & Contractual, and Organizational risks.

### **4.1 Risk Score**

Risk score is a quantifiable attribute calculated by utilizing the risk template. The risk template values six types of risk previously stated. It assists the proposal developers to assign a value to each separate risk category.

For this criterion, a "good" answer:

- Utilizes the ***risk score template***.
- Provides the risk score summary sheet resulting from the risk analysis:

**Unacceptable:** Unacceptable responses are those that are left blank. Each risk category identified in the risk template must be addressed and scored. If specific risks in risk categories cannot be identified then provides a justification, with supporting rationale.

**Acceptable:** Acceptable responses are those that examine:

- All potential risks;
- Including individual risks under each risk category;
- The likelihood of the risk and its impact on the project.

**Good:** Good responses are those that examine:

- All potential risks, including individual risks under each risk category;
- Likelihood and impact scores;
- What the risks mean to the project.

**Possible Data Source:**

- Additional instructions and examples are in the Risk Analysis Guide (Chapter IV-F)

### **4.2 Quality of Risk Analysis**

The quality of the risk analysis represents the Capital Investment Board's evaluation of the completeness of the risk analysis.

For this criterion, a "good" answer:

- Identifies and analyzes all of the six potential risk components associated with the initiatives, with supporting data and calculations;
- Utilizes the **risk score template**.

**Unacceptable:** Unacceptable responses are those that are left blank. Each risk category identified in the risk template must be addressed. If specific risks in risk categories cannot be identified, then provide a justification with supporting rationale.

**Acceptable:** Acceptable responses provide a completed risk template, including:

- Identification of specific risks within each risk category;
- Realistic scoring of the impact and likelihood for each risk.

**Good:** Good responses provide a complete risk template, including:

- Identification of specific risks within each of the six risk categories;
- Realistic scoring of the impact and likelihood for each risk;
- Justification of each identified risk and the impact on the project.

**Possible Data Source:**

- Risk Analysis Guide (Chapter IV-F)

### **4.3 Quality of Risk Control Plan**

Quality of risk control plan refers to the quality of the initiative's risk mitigation plan. The risk mitigation plan is a plan to control the defined risks associated with the adoption of the initiative.

For this criterion, a "good" answer:

- Establishes a list of identified risks;
- Identifies risk control variance (e.g., 10% cost or schedule overruns) at which the corrective action plan is initiated;
- Identifies who is responsible for executing the control plan;
- Details plans to reduce and control the identified risks;
- Identifies internal resources available to mitigate risk.

**Unacceptable:** Unacceptable responses are those that are left blank. It is unacceptable to identify a risk without providing a risk control plan.

**Acceptable:** Acceptable responses are those that include a control plan to mitigate all identified risks. For example,

Risk	Risk Controls
Financial Controls	<ul style="list-style-type: none"> <li>• Utilize Earned Value analysis during project lifecycle to control costs</li> </ul>

**Good:** Good responses are those that include a control plan to mitigate risks and provide data to support the controls. For example,

Risk	Responsible Party	Risk Controls	Internal Mitigation Resources
Financial Controls	John Smith: (555) 555-1012	<ul style="list-style-type: none"> <li>Utilize Earned Value analysis during project life cycle to control costs.</li> <li>Perform a cost-benefit and economic analysis</li> <li>Subject the project to a rigorous investment management program</li> <li>Establish clear benefits to be realized</li> <li>Use competitive bidding for each increment of project design</li> <li>Implement an IT Investment Review Board</li> </ul>	<ul style="list-style-type: none"> <li>The project team is trained in Earned Value analysis, and can use this method to track and control project overage.</li> <li>An investment management team has been established. Each member has expertise in investment management.</li> <li>A Competitive bidding process currently exists.</li> <li>An IT Investment Review Board has been brought together for other IT projects. The board is experienced and knowledgeable.</li> </ul>

**Possible Data Source:**

- Risk Analysis Guide (Chapter IV-F)

## 5. Special Emphasis (VHA Construction Only)

Special emphasis refers to the proposal's ability to support one or more of the FY 2002 Special Emphasis Programs.

- Spinal Cord Injury (SCI)
- Severely Chronically Mentally Ill (SMI)
- Traumatic Brain Injury (TBI)
- Blind Rehabilitation
- Post Traumatic Stress Disorder (PTSD)
- Prosthetics (Amputation)

For this criterion, requirements include:

- Information on the percentage of the cost of the proposal that is dedicated to the special interest program. (At least 70% of the project's investment value should be dedicated to this criterion, before it is considered under this category.)
- Data sources and calculations.

## 6. Seismic (VHA Construction Only)

The seismic criterion refers to the initiative's ability to mitigate an immediate and verifiable seismic threat to VA staff, patient, and the public.

For this criterion, requirements include:

- Information on what percentage of the proposal cost is dedicated to the seismic criterion. (At least 70% of the project's investment value should be dedicated to this criterion, before it is considered under this category.)
- Engineering study certification of the condition of the structure.
- Certification of the seismic zone in which the proposal is located.
- Acknowledgement of inclusion in the VA Seismic Study completed in response to the Presidential Directive on seismic safety.

## 7. Strategic Alignment

The VA Strategic Plan defines the mission and goals of the Department. It is this strategy which guides and provides the path to the VA's future. Alignment with these objectives creates a Department working in unison toward accomplishing the goal. The five categories identified by the VA include: Quality of Life, Ensure Smooth Transition, Honor and Memorialize, Public Health and Socioeconomic Well Being, and One VA.

### 7.1 Quality of Life and Restoration

Quality of life and restoration refers to the initiative's ability to restore the capability of disabled veterans to the greatest extent possible and improve their quality of life and that of their families, as defined by the Department strategic goals (11/15/99).

For this criterion, a "good" answer:

- Identifies the quality of life strategic goal and performance metrics from the VA Strategic Plan, then illustrates how the initiative improves the quality of life for the disabled veteran and their families.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not have any impact on quality of life, with supporting rationale;  
-Or-
- might include, but is not limited to, the following:

This project meets two of the four objectives within the VA strategic plan. Those are Objective 1.1 and Objective 1.2. The investment does this by improving speed of ratings and improving case management to allow Vocation Rehabilitation Counselors to spend more time with veterans.

**Good:** Good responses provide some kind of analysis supporting the response. The following is an example of a good response:

VA has been charged with restoring the capability of disabled veterans and improving their quality of life and that of their families. This project will meet two of the four objectives in the "Department of Veterans Affairs: FY 2000-2005 Strategic Plan."

Departmental Objective	Justification
1.1 Disabled veteran and special populations of veterans	This system improves the speed of ratings major educational claims activities to meet customer needs.
1.2 Quality of life and economic status	This system will improve case management and enable Vocational Rehabilitation Counselors to spend more quality time with veterans. It will serve as a resource for planning programs and profiling the veteran's skills and expertise.
1.3 Service disabled veterans	This project does not address this objective.
1.4 Survivors of service disabled veterans	This project does not address this objective.

**Possible Data Source:**

- Department of Veterans Affairs: FY 2000-2005 Strategic Plan (Draft 11/15/99)

## **7.2 Ensure Smooth Transition**

Ensure smooth transition refers to the Department's goals of ensuring the smooth transition for veterans from active military service to civilian life, as defined by the Department strategic goals (11/15/99).

For this criterion, a "good" answer:

- Identifies the smooth transition goal and performance metrics, then illustrates how the initiative improves upon the smooth transition of veterans from active military service to civilian life.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not have any impact on ensuring a smooth veteran transition, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

This project will allow the VBA to meet Objective 2.3 and 2.4 by implementing a new system. This project will expedite the home loan process thereby increasing the veteran's satisfaction with the home loan process.

**Good:** Good responses must provide some kind of analysis supporting the response. The following is an example of a good response:

VA has been charged with ensuring the smooth transition of veterans from active military service to civilian life. This project will meet two of the four objectives in the "Department of Veterans Affairs: FY 2000-2005 Strategic Plan."

Departmental Objective	Justification
2.1 Ease of reentry	This project does not address this objective.
2.2 Educational opportunities	This project does not address this objective
2.3 Home loan	The new system will expedite the veteran home loan process, a concern of veterans. This system will lead to both veteran and lender satisfaction.
2.4 Life insurance	This system will allow for the continuous tracking of external life insurance policy rates and features, which in turn will ensure that VA rates and features are competitive.

**Possible Data Source:**

- Department of Veterans Affairs: FY 2000-2005 Strategic Plan (11/15/99)

### **7.3 Honor and Memorialize**

Honor and memorialize refers to the Department's goal of honoring and serving veterans in life and memorializing them in death for their sacrifices on behalf of the nation, as defined by the Department strategic goals (11/15/99).

For this criterion, a "good" answer:

- Identifies the honor and memorialize goal and performance metrics, then illustrates how the initiative improves upon the goal of honoring and serving veterans in life and memorializing them in death for their sacrifices on behalf of the nation.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not have any impact on honoring and memorializing the veteran's life, with supporting rationale;
- Or-
- might include, but is not limited to, the following:

This project will allow NCA to meet two of the five objectives. It will increase service to veterans and increase the number of headstones and markers that are undamaged and correctly inscribed.

**Good:** Good responses must provide some kind of analysis supporting the response. The following is an example of a good response:

VA has been charged with honoring and servicing veterans in life and memorializing them in death for their sacrifices on behalf of the nation. This project will meet two of the five objectives in the "Department of Veterans Affairs: FY 2000-2005 Strategic Plan."

This project will provide extended service to about 244,500 veterans who would not be served if the cemetery closed. The number of gravesites in this geographic area will be increased by 26,400 full casket, 17,000 remains, which will provide space for about 60,000 interments until 2020.

The national cemetery identifies not only veterans and eligible family members as "customers" but also considers the cemetery visitors as customers. The number of visitors is estimated, from experience, to be the number of interments multiplied by 33. Those affected by this investment are considered external facility customers. The following table identifies the numbers of interments, visitors, and veteran deaths projected.

Projected Workload	2001	2010	2015	2020
Annual Interments	3,050	3,570	3,396	3,254
Annual Visitors	100,650	117,810	112,068	107,382
Estimated Veteran Deaths	5,700	6,419	6,285	6,017

Departmental Objective	Justification
3.1 Overall health of enrolled veterans	This project does not address this objective.
3.2 Standard of living	This project does not address this objective.
3.3 Life insurance	This project does not address this objective.
3.4 Burial needs	This project will allow the NCA to increase survey respondents evaluation to excellent by improving the services to the veteran's family.
3.5 Symbolic expression of remembrance	This project's increased on-line function will simplify the process of on-line monument ordering, thereby increasing the number of on-line orders.

**Possible Data Source:**

- Department of Veterans Affairs: FY 2000-2005 Strategic Plan (11/15/99)

## **7.4 Public Health and Socioeconomic Well Being**

Public health and socioeconomic well being refers to the Department's goals of contributing to the public health and socioeconomic well being and history of the nation, as defined by the Department strategic goals (11/15/99).



For this criterion, a “good” answer:

- Identifies the public health and socioeconomic well being goal and performance metrics, then illustrates how the initiative improves upon the goal of contributing to the public health and socioeconomic well being and history of the nation.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not have any impact on the public health and socioeconomic well being, with supporting rationale;  
-Or-
- might include, but is not limited to, the following:

This project will allow the VHA to meet two of the five objectives. It will advance VA medical research and development to better serve the veteran population and contribute to the nation’s knowledge of disease and disability. It will further ensure the appropriate supply of health care providers through partnerships with the medical education community.

**Good:** Good responses must provide some kind of analysis supporting the response. The following is an example of a good response:

VA has been charged with contributing to the public health, socioeconomic well being and history of the nation. This project will meet two of the five objectives in the “Department of Veterans Affairs: FY 2000-2005 Strategic Plan.”

Departmental Objectives	Justification
4.1 Research and Development	This project will increase the probability of receiving funds for research projects in Designated Research Areas by more than 50%.
4.2 Partnerships with the medical education community	This piece of equipment will allow the hospital to partner with <i>Affiliated University</i> to lead the medical community in cutting edge research. There is a 70% probability that this will attract 20% more healthcare providers to the veteran medical community.
4.3 National emergency response time	This project does not address this objective.
4.4 Veteran benefits and business assistance	This project does not address this objective.
4.5 Preservation of Nation’s history at National Cemeteries	This project does not address this objective.

**Possible Data Source:**

- Department of Veterans Affairs: FY 2000-2005 Strategic Plan (11/15/99)

## **7.5 One VA**

One VA refers to the initiative's ability to address a crosscutting initiative proposed by one administration that supports at least one other administration in a combined effort to deliver seamless integration of benefits or services to the customer. One VA customer service is further defined as the ability to provide One VA world class service to veterans and their families through the effective management of people, technology, processes, and financial resources.

For this criterion, a "good" answer:

- Addresses how the initiative enhances the VA cross cutting opportunities;
- Identifies the impacted administrations;
- Details how much of an impact the initiative will have upon the administrations.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- those that indicate that the proposal will not have any impact on One VA, with supporting rationale;
- Or-
- the investment has the potential for One VA; and
- might include, but is not limited to, the following:

VHA intends to purchase Microsoft Office licenses to provide all of VHA with the same software office products. This purchase will further allow the remaining licenses to be made available to NCA and VBA. Both of these administrations have agreed to purchase these licenses at cost savings to the entire VA.

**Good:** Good responses must provide some kind of analysis supporting the response. Proposals demonstrate that projects are jointly funded or provide a Memorandum of Agreement between two or more Administrations, which indicate support with funds, or FTE to promote a One VA. The following is an example of a good response:

VHA's initiative to purchase Microsoft Office licenses will result in providing all of VHA with the same software office products as well as providing remaining licenses to NCA and VBA. As a result, this initiative allows all administrations to use the same versions of Microsoft office, which will:

- Reduce document conversion time. Currently, staff satisfaction surveys indicate that there is substantial difficulty with document conversion, due to the number of software applications being utilized by VA. 28% of respondents indicated having lost documents, while 48% have had to retype documents before distribution.

-And-

- Enhance information sharing between administrations by increasing communications by 28%. Over one-quarter of those employees surveyed, indicated that they have lost documents during conversion. Further, 15% of those who have expressed confusion with conversion have indicated that at one time or another, they have not communicate at all.
- Letters and documentation of support from NCA and VBA are included in Appendix A-1.

Another example for this criterion is:

This project is being proposed by VBA and is supported by VHA as a One VA effort to deliver seamless integration of benefits and health services to Indiana veterans and their families from a single location. VHA's VISN 11 has proposed to Department Headquarters that the non-construction cost of this project be offset with \$2.5 million from the VA-Indiana Enhanced Use Lease Trust 1996-1, Cold Spring Road Campus that is designated for the benefit of Indiana veterans. The Trust fund will be used for separate and distinct services such as furniture, and approved through the VA Trust Board.

The Department's goals of Ease of Access, Customer Satisfaction, Prompt Delivery of Services and Benefits will be accomplished in the State of Indiana with this project. (Appendix C, DVA Strategic Plan for FY98-03, Part III, Benefits Programs, pages 51-57). A collocated facility will provide better service, more effective operations, and increased cooperation across organizational lines. Easy access and free customer parking, at one convenient location, will improve services and veteran satisfaction.

To further solidify the One VA concept, there are other sharing opportunities that will improve employee satisfaction and contribute to cost reductions. The VAMC has existing programs and services that will be made available to VARO staff. These include a conveniently located Medical Media Service, Resource Library, ongoing Career Development courses, VA Canteen Service, and a full service Credit Union. There are also opportunities to integrate various operating functions such as the mailroom, publications, reproduction, supply service, and loading dock.

The VARO is interested in expanding their Comprehensive Work Therapy program, currently consisting of two veteran patients. This will be easily accomplished at the proposed location. The VARO will also be able to take advantage of the VAMC's extensive Volunteer Program, freeing up full-time employees to focus more time on workload priorities.

**Possible Data Source:**

- Department of Veterans Affairs: FY 2000-2005 Strategic Plan (11/15/99)
- Letters from other Agencies that state that they can't provide the program or services.
- Letter from other VA Administrations stating that they support the initiative or that they are willing to commit FTE/\$ to the initiative.

## B. INFORMATION TECHNOLOGY INVESTMENT PROPOSAL CRITERIA GUIDE

The Information Technology Capital Investment Proposal Criteria apply to IT proposals only. They will be evaluated during the Technical Review Phase of the Capital Planning Process. This requirement is **in addition to** the proposal requirements set forth by the VA Capital Planning Process during the Strategic Review Phase.

### The IT Capital Investment Proposal Process

Documentation on the five criteria and their sub-components (Figure 6) will be used for the technical review, scoring and ranking of IT capital investment proposals. These criteria were developed from the “Raines Rules” with adjustments and weights defined by the VA Chief Information Officer (CIO) Council. Criteria weights (Figure 7) defined for scoring FY2002 proposals are noted after each criterion. Certain sub-criteria must be addressed for the proposal to be considered valid and ready for further review.

IT projects are subject to their own validation and evaluation during the Technical Review Phase. This evaluation will be performed by the CIO Investment Panel, a group chartered and tasked by the CIO Council. Results are presented to the CIO Council for their review and validation. An IT project must first pass validation, then evaluation to proceed to the Strategic Review Stage within the VA Capital Planning Process. During *validation*, proposals will be graded upon their ability to meet the acceptable or good response requirements. Unacceptable responses will receive 0 points, acceptable responses will receive 1 point and good responses will receive 2 points. To pass validation, a minimum of 14 points must be accumulated among a possible 28. Further, acceptable or good responses *must* be submitted within the following categories:

- Mission- Organizational Improvement
- IT Architecture- Standards
- IT Architecture- Interoperability
- IT Architecture- Security
- Project Management- Project Structure
- Project Management- Technical Approach
- Minimizing Risk- Technical
- Minimizing Risk- Schedule
- Minimizing Risk- Financial

Proposal writers may use the IT Validity Checklist as a guide for completing the validation component of the IT Capital Investment Proposal Criteria. (Table 8).

Once a proposal has passed validation, it will be evaluated upon its merit, ability to substantiate claims and statements, and overall ability to meet the goals and

mission of VA. During evaluation, the CIO Investment Panel evaluates proposals against the criteria requirements and provides a ranking of proposals to the CIO Council. Upon validation by the CIO Council, proposals are advanced to the Strategic Review Phase of the VA Capital Planning Process under signature of the VA CIO.

### **The IT Capital Investment Proposal Criteria Guide**

This document is a guide to completing the Information Technology Capital Investment Proposal Criteria. It includes descriptions, examples, and potential data sources for each of the criteria that need to be addressed in the proposal application. Proposals will be evaluated based upon their ability to include the required elements defined in this document.

There are examples for each IT Capital Investment criterion. These examples indicate the suggested data type and information that are useful in evaluating proposals. They are by no means the only acceptable responses. They merely serve as content suggestions.

Data calculations and documentation (such as, surveys, industry analysis, primary source documentation, etc.) should support all statements and assumptions. This information will be researched and assembled by the proposal team.

### **Cost Benefit Analysis**

IT proposals must include a Cost Benefit Analysis (CBA), as defined by OMB Circular A-94. VA requires a full CBA for very large, complex and costly IT projects, including those subject to this capital investment process. The CBA should provide vital management information on the allocation of personnel, financial and information resources that support the project. *Alternatives Analysis, Customer Satisfaction Survey, Cost, Schedule and Risk Analysis* should be included. Expand the CBA by describing the results, both in terms of life cycle costs, life cycle savings, and benefit cost ratio for each alternative analyzed. As an attachment, analyze and document the anticipated Return on Investment. Include pilot/prototype data available and performance measures so improvements can be quantified through the measurement of program outputs.

This page is intentionally blank

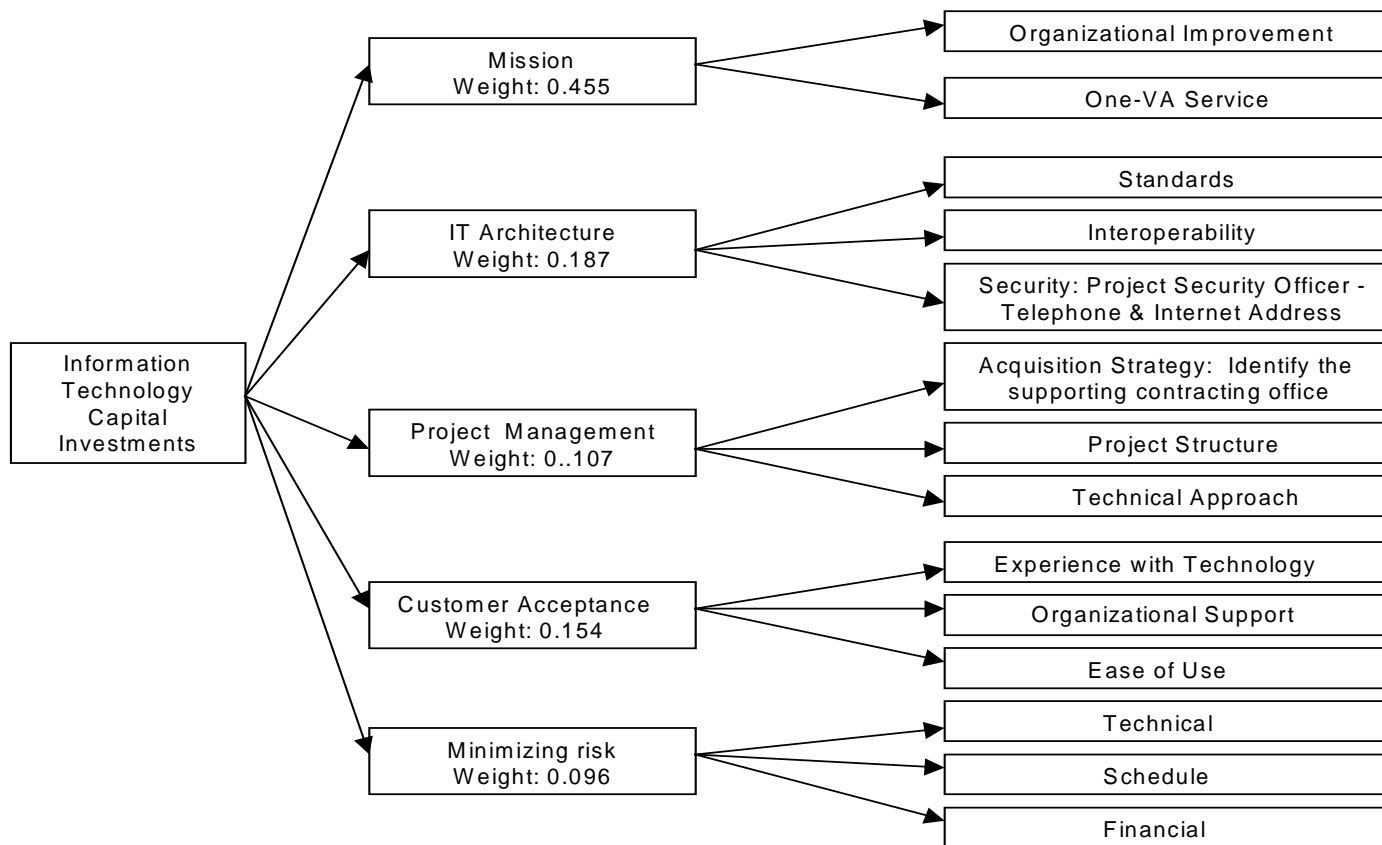
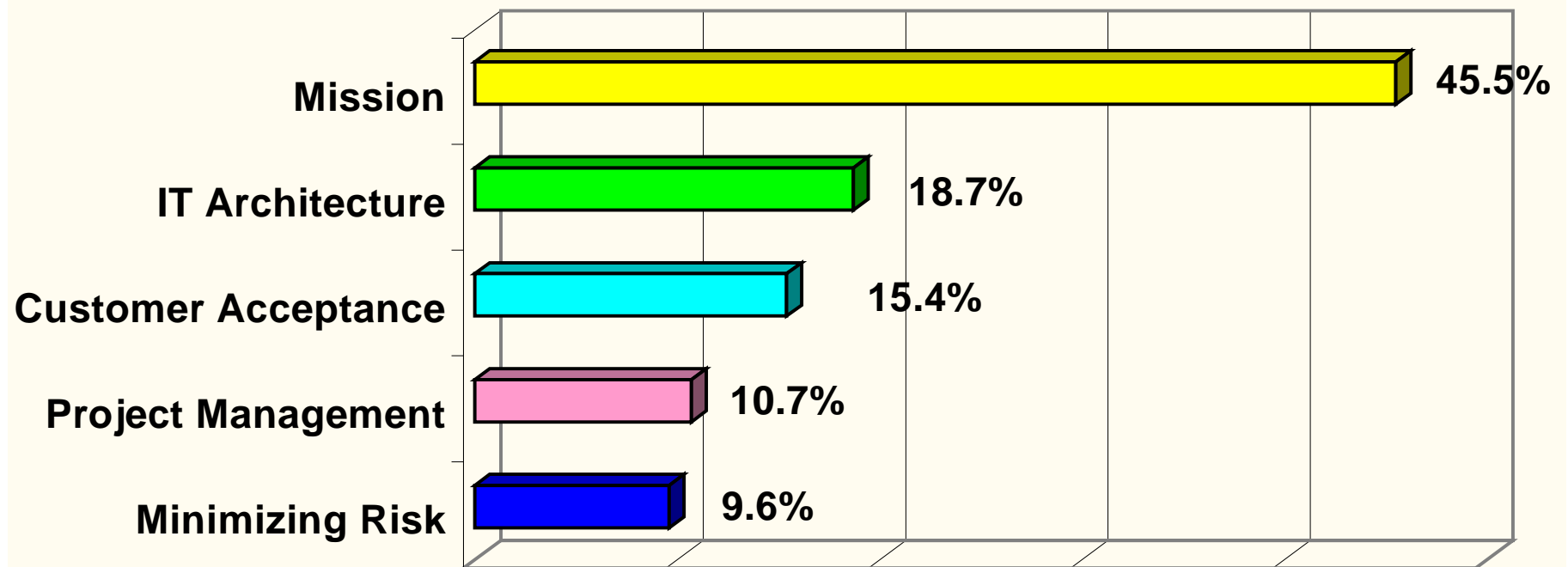
**Figure 6: FY 2002 Decision Hierarchy for the CIO**

Figure 7: FY 2002 Decision Hierarchy Weights for the CIO





## B. IT Capital Investment Proposal Criteria

### 1. Mission (Weight: 0.455)

The mission of VA serves as the guide for all VA efforts. It defines the foundation upon which all projects must be rooted. All projects must support the current VA Strategic Plan.

Please summarize the project's adherence to the following mission requirement:

- Describe how these projects support and/or integrate with the VA Strategic Plan, and the organization (e.g., VHA, VBA, NCA, Staff Offices) business and administrative plans.

#### 1.1 Organizational Improvement

Please address the following organizational improvement requirements:

- Show "strategic linkages" and "baseline assessments," as described in the OMB Capital Programming Guide;
- Quantify and qualify the mission or program improvement;
- Describe how the project enhances performance (quality); reduces costs; improves processes; improves accuracy; or improves productivity;
- Provide quantitative information (e.g., projections, as well as the basis for those projections). Where quantitative information is not available, please provide specific qualitative information, as well as the basis for the information;
- Provide studies and/or statistical analyses as support documentation.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.
- Or-
- a rationale for those proposals that will not have any impact on Organizational Improvement, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

This proposal meets Objective 5.5 of VA Strategic Goal 5 by improving overall governance and operational management of VA's assets. As shown by our Cost-Benefit Analysis, we expect to achieve a positive financial return on this

investment along with several qualitative returns that meet other Objectives under the VA strategy.

Actual implementation of a new on-line benefits program website will increase awareness of and access to benefits and services for veterans and their families (Goal 5, Objective 5.1) by providing a 24 hour, 7 day a week access to the necessary forms and databases required to apply for benefits. While our demographic studies indicate that this will initially service only about 40 percent of the existing veteran population, it will allow VA to decrease its existing customer service staff by 20 percent and retrain an additional 10 percent of that staff in the technologies/processes necessary to support an on-line benefits program. This supports Objective 5.3 of Goal 5 through the continual development of our existing workforce and provides the intangible benefit of employee growth.

The full Cost-Benefit Analysis is attached, however we expect a positive return of 30% over a 5 year period. The total net present cost of the system will be \$1.1 million with annual real O&M costs of \$820,000. The total quantified real savings over this same 5 year period is \$6.78 million resulting in an NPV of \$1.58 million.

In addition to employee growth through retraining, other unquantified benefits include: improved efficiencies with reporting to management, improved demographic information, increased exposure to the veteran population, improved data quality and access, improved access for veterans, and increased productivity of customer service workers responding to the on-line system. A complete list of benefits can be found in the CBA.

We have provided statistical, financial, and demographic information to support our assertion that the implementation of an on-line benefits system will contribute to our overall organizational improvement.

**Possible Data Source:**

- OMB Capital Programming Guide.
- VA Strategic Plan.

**1.2 One VA Service**

Describe how your project supports crosscutting opportunities identified in the VA IT Strategic Plan. The VA IT Vision document, Vision of Information Technology Enhanced Customer Service, describes four categories of IT concepts or functional capabilities, each of which contributes in a coordinated way to an environment of integrated customer service. Describe how your proposal supports a One VA and how current and emerging technology will support its successful implementation.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.
- Or-

- a rationale for those proposals that will not have any impact on One-VA Service, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

This initiative directly supports the Secretary's vision of providing One VA world class service as articulated in the "VA Strategic Plan, 1998-2003" and the "National Concept of Operations." Specifically, the initiative implements the telephone infrastructure and services necessary to support all performance goals defined for Objective 2: Improve telephone access to information, under General Goal 1: Ease of access, within Section 1 of Part II of the VA Strategic Plan. This initiative will build the critical foundation to meet VA Performance Goals for all calls to VBA and provides the infrastructure upon which the capabilities to service NCS, VBA, and VHA customers can be built. This initiative is presently focused on the five business areas of the VBA. However, it does demonstrate that the architecture can become cross-cutting. For example, in the past, each of the five business units within VBA required their own toll free numbers. With the implementation of the National Automated Response System (N-ARS), it was demonstrated that C&P and EDU could be combined into one architectural solution. The N-ARS further demonstrates that a transition to One VA (i.e. one toll free number) can be easily supported. Within the menu structure of N-ARS, a toll free number accesses the top of the menu structure while another toll free number accesses the same menu at the EDU level. It is a simple manner to expand the N-ARS menu to include all five business areas and ultimately, cross VA organizational boundaries.

The quantitative results that have been accumulating with respect to the N-ARS demonstrate that this architecture is clearly moving the VBA toward the target objectives. The proposed architecture will provide additional capabilities that will further accelerate the progress.

The VBA is aggressively pursuing the use of telecommunications technologies as a means to support changed business processes within the VA and VBA. In particular, the VBA strategy is the basis for the telephone based customer service improvements articulated by the Department in the One VA information technology document issued in January 1998. The VBA customer service strategy has been developed as a result of extensive dialog among VBA customer service leadership regarding the VBA "National Concept of Operations."

**Possible Data Source:**

- VA IT Strategic Plan.
- Vision of Information Technology Enhanced Customer Service.

## 2. IT Architecture (Weight: 0.187)

The VA Technical Architecture provides a road map for projects to migrate to the suite of common standards supported throughout the Department. The architecture's flexibility allows VA organizations to exercise some discretion and control over specific products and systems, while moving VA toward common implementations of infrastructure services.

Please summarize the project's adherence to the following IT architecture requirements:

- Describe how the project enables and promotes technology integration and communication across systems;
- Describe how the project positions VA to enter into mutually beneficial partnerships internal and external to the Department;
- Describe how the project positions VA to take advantage of innovative technology in performance of business functions and service delivery;
- Describe the project adherence to VA's established performance principles, models and standards;
- **Provide written documentation from your VA IT Architecture Team representative.**

## **2.1 Standards**

Please address the following Standards requirement:

- Show the extent to which the proposal's overall design and individual system hardware, software, and communications elements use the applicable standards and products set forth in the VA Standards Profile (Section 4, VA Technical Architecture).

**Unacceptable:** Unacceptable responses include:

- those that are left blank or do not contain significant data to support conclusions.  
-Or-
- those projects which deviate from the Technical Reference model services using standards or products that are not in the VA standards profile.

**Acceptable:** An acceptable response includes:

- one that is consistent with the standards found in the VA Standards Profile.  
-and-
- one that answers the above stated requirement.

**Good:** Good responses are those that address the above stated requirement and includes conclusive data to support all statements.

A good response might include, but is not limited to, the following:

The technical specifications of the new patient record system were designed completely in conformance with the VA Technical Architecture of May 1999 and utilizes primarily COTS software. This system will be maintained in the VISN XX headquarters. The following table highlights the technologies employed:

<b>Technologies Employed by Proposed Patient Record System (PRS)</b>		
<b>Category</b>	<b>Technologies Used</b>	<b>Comments</b>
Operating System Services	Microsoft Windows NT 4.0	All components including databases will be developed around Microsoft based products.
	Microsoft NT Server 4.0	
	Microsoft Back Office	
	Microsoft Visual Basic 6.0	
	Microsoft Information Server	
Directory Naming Services	DNS	
System and Network Management Services	SNMP	
Local Area Network Services	IEEE 802.3u (100 Base-T)-- Proposed	Currently seeking authorization from AAC to employ Gigabit Ethernet.
Wide Area Network Services	Frame Relay ANSI T1.606	Connection with Modem Dial-In Service ITU-T V Series under review.
Cable Plant Services	Fiber Optic Cat. 5	
Connectivity Services	TCP/IP	
Distributed Computing Services	DCOM	Not currently employed by NCS
Data Management Services	SQL (Microsoft)	SQL is in compliance with FIPS 127-2. ActiveX, OLE, and ODBC are new technologies to VHA, but are in accord with the VA Architecture and are employed with VBA and AAC. FTP is secure and for limited use.
	ActiveX	
	OLE	
	ODBC	
	FTP	
	SGML, HTML, XML, TIFF, WINZIP	
Data Interchange Services	HL7 v 2.4	
	EDI	
Identification Services	HTTP	
	ASTM E1714	
Accountability Services	IPSEC	IPSEC is an emerging technology under review with dial-up service.
	ASTM 1769, 1869	
Non-Repudiation Services	SSL	
Confidentiality Services	FIPS 46-2 DES	

The system will utilize a standard 3-tier architecture with a web server being separate from the DBMS and will be fully integrated with existing network services. The mixed use of standard and emerging technologies will ensure an acceptable life with opportunity for incremental upgrades. Additionally, the system provides for scalability. The core of the system is the 3-tier client/server architecture which will allow for further partitioning. As workload or record keeping demands increase, the architecture can be further partitioned and/or scaled to meet requirements.

**Possible Data Source:**

- VA Technical Architecture

**2.2 Interoperability**

Please address the following Interoperability requirements:

- Describe the degree to which the project implements networked data exchange and sharing;
- Describe the degree to which the project implements integration among applications and multi-vendor or multi-platform equipment;
- Identify how the project does or does not have the capability to inter-operate with organizations internal to the Department or with external organizations.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.
- Or-
- a rationale for those proposals that will not have any impact on Interoperability, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

Virtual VBA is based on the corporate data model developed. This model contains entities, attributes, and relationships that span the entire scope of VBA operations. The design of this model allows for a flexible system that can adapt to VBA's requirements and maintain interoperability among various systems.

Virtual VBA is based on VA Information Technology Standards. System development and integration interoperability is supported by implementing standards and following accepted methodologies. Additionally Virtual VBA shares the technical infrastructure such as hardware, telecommunications, and platforms with existing systems (corporate database) Virtual VBA will operate over the existing infrastructure and can connect to other systems by using technology and interfaces.

A variety of systems are used during the cycle of processing veteran benefits claims, depending on the information needed to complete a claim. C&P staff often perform redundant data entry into these separate systems. These systems include establishing the original claim in BDN, capturing the location of the folder in BIRLS, recording the individual working on the folder in COVERS, rating the claim through the Rating Board Automation System (RBA), and scheduling the veteran exams through the Automated Medical Information Exchange (AIME). Currently, each system requires its own user identification and password for

access and each system requires the redundant re-entry of general veteran information. One interface point to all the claims processing systems would increase the efficiency and accuracy of claims processing.

With an assigned user identification and password, users will be able to access a veteran's claim folder and a general information page about the veteran. The general information page will contain links to different VA systems. By clicking the appropriate navigation button, Rating Specialists and VSRs will be able to populate fields in a separate system with the veteran's information presented on the general information screen. By having this interface from the electronic folder, users can easily and efficiently obtain the materials needed for accessing the claim. System interfaces will have the most impact on the productivity of the users of the system. By transferring basic veteran information from one system to another, and having automatic capture of actions into the appropriate indexes, Virtual VBA will not only reduce redundancy and errors in data entry, but will also increase accuracy through a user focus on decision making.

Consequently, this investment will establish an electronic work environment to allow easier access to veteran information and to compliment other VBA and VA information technology initiatives, including the Personal Information Exchange System (PIES), the Claims Processing System (CPS), the Information Technology Linkages/Interfaces (BDN/RBA interfaces), and the Automated Medical Information Exchange (AMIE II). This initiative will promote electronic data exchanges between C&P Service, VAMC, the Board of Veterans Appeals, National Cemetery Administration, the Records Management Center, Social Security Administration, Department of Defense and others. With these data exchanges and linkages, this initiative will directly impact accuracy and processing timeliness which will, in turn, lead to increased customer satisfaction.

**Possible Data Source:**

- VA Technical Architecture

**2.3 Security**

Please address the following Security requirements:

- Describe or indicate the current status of the Security Plan for this project that ensures appropriate confidentiality, integrity, and availability. This includes rules of the system, training, personnel controls, incident response capability, continuity of support, technical security and system interconnection. Refer to OMB Circular A-130, Appendix III, and VA Directive 6210, Computer Security Act of 1987 (PL 100-235) for guidance and NIST Special Publication 800-18 on required content;
- Provide current accreditation status;
- Cite any areas of non-conformance to existing VA and Administration/Staff Office policies for security, privacy, and records retention;
- Summarize key life-cycle information security milestones for the initiative, including dates and associated costs;
- Name the Project Security Officer with phone number and internet address.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.
- Or-
- a rationale for those proposals that will not have any impact on security, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

Due to the sensitive nature of veterans' medical records, access to information will be limited to the appropriate individuals. Security in the form of user ids and passwords will be used to grant access to specific identified personnel. Currently, in the paper environment, there is limited security of paper folders. Folders can be stacked on desks and on top of filled file cabinets. Anyone can review these folders, however, in an electronic environment, this access is limited. Virtual VBA will provide several security functions that will prevent personnel from viewing data not related to their job functions. These security functions include:

- Rigorous identification and authentication.
- 28 Bit Encryption for potential Internet users.
- Firewall security for central site servers.

During the Implementation Planning phase of the project, a detailed security plan will be drafted in accordance with federal regulations, such as the Computer Security Act of 1987. The Virtual VBA project team will create a security plan and train all users and operator of sensitive equipment. OMB Circular A-130, Appendix III, provides the following guidelines for controls for general support systems and outlines a security plan:

- Assign responsibility for security;
- Create a system security plan
- System rules
- Training
- Personnel Controls
- Incident Response Capability
- Continuity of Support
- Technical Security
- System Interconnection;
- Review controls when system modifications occur;
- Management authorizes the security controls.

The physical storage of files will also be more secure with Virtual VBA. Paper is susceptible to wear and damage. Electronic information can be stored and preserved for nearly an infinite amount of time. However, like any IT project, data is subject to electronic failure. As a result, Virtual VBA has implemented two security measures—System back-up and disaster recovery.



**System Back-up**

All information stored on optical disks will be copied onto tape arrays and stored in a separate location. Therefore, if the information at the central storage site is damaged or destroyed, a copy of all veteran information will be housed in another location.

**Disaster Recovery**

Disaster recovery plans will be in place to continue the processing of veteran claims in the event that a major destruction occurs at the central site. The disaster recovery plan includes creating a duplicate capture site, at a separate location. This location will be one of the communication hubs—Philadelphia, Washington D.C., Hines or Austin. This site will be a mirror site to the central site and will house the same hardware and software that is located at the live capture site. In the event that a disaster occurs, production can move to the duplicate site. The disaster recovery plan would enable VBA to be up and running within five days of the occurrence.

In addition to the above security measure, Virtual VBA will also include physical security measures at the central site, regional office, back up site, and disaster recovery site. The Virtual VBA hardware will be contained in the locked and secure environment to prevent unauthorized personnel from entering the facility.

**Possible Data Source:**

- Computer Security Act of 1987 (PL 100-235)
- NIST Special Publication 800-18
- VA Technical Architecture
- OMB Circular A-130, Appendix III
- VA Directive 6210

**3. Project Management (Weight: 0.107)**

Project management and control are significant factors toward the successful completion of projects. They are especially important to Information Technology projects.

Please summarize the project's adherence to the following Project Management requirements:

- Define management structures that will be implemented for your project to ensure success and achievement of goals/objectives and costs;
- Identify accountable senior management officials and committees/groups, if any, that will be established for project management, oversight, or guidance/advice;
- Include any pertinent training/certification of the members of the project management team.

**3.1 Acquisition Strategy**

Please address the following Acquisition Strategy requirements:

- Identify the contracting office that will be providing acquisition support for this initiative;
- Describe the planned procurement approach, (e.g., multiple awards, sole source, 8A set aside);
- Describe other planned strategies for managing the acquisition, including modular acquisition or performance based incentives for contractors;
- Describe the measure being taken to ensure full and open competition.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.
- Or-
- a rationale for those proposals that will not have any impact on Acquisition Strategy, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

The contracting office will be the C&P, Regional Office XXX. Phone: (XXX) XXX-XXXX.

The acquisition strategy approach is to develop the RFP and select the Virtual VBA prime contractor. The award to the prime contractor will be a single competitive award. The prime contractor will be responsible for working with VBA management to design, configure, and install Virtual VBA. This contractor may subcontract out specific functions of implementation, but the prime contractor is ultimately responsible for ensuring that the project is completed in accordance with VBA's schedule, cost, technical, and functional requirements. The prime contract would be designed in a modular fashion with identified critical milestones. Upon reaching a milestone, the completed work will be assessed by VBA management to verify satisfactory completion before payment. In addition to the prime contractor, a separate contract will be awarded for later stages, in order to assure objectivity.

A monopoly on future procurements will be avoided due to the selection of COTS standard-based systems. The market for imaging software and hardware consists of multiple vendors.

Overall, the following two broad strategies will guide the acquisition:

- VBA's business needs will drive Virtual VBA- Virtual VBA will be designed to support the goals and objectives of the organization. Specifically, Virtual VBA will be implemented to improve the C&P claims processing. Requirements sessions with C&P staff, during the acquisition phase of the

project, will be conducted to ensure that the end product enables users to be more efficient and accurate in their work.

- Virtual VBA will be based on COTS products- The Clinger-Cohen Act mandates use of COTS products when practical because of their many advantages, including ease of upgrading, rapid deployment, and foundation in best business practices. Another advantage is that many large commercial companies now offer COTS products in the federal marketplace.

**Possible Data Source:**

- Federal Acquisition Strategy (FAR)- Part 7- Acquisition Planning. (Federal)
- Federal Acquisition Strategy (FAR)- Part 807- Acquisition Planning. (VA)
- Federal Acquisition and Streamlining Act of 1994

**3.2 Project Structure**

Please address the following Project Structure requirements:

- Provide an implementation plan with milestones and key decision points;
- Describe measures that will be used to assess performance and achievement of goals/objectives;
- Describe desired/expected outcomes;
- Describe how the project will be implemented on time, within cost (achieving 90% of schedule and cost goals) and how the proposal will be implemented (achieving 100% of performance goals) as planned.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.
- Or-
- a rationale for those proposals that will not have any impact on Project Structure, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

A formal project manager, *John Doe*, will manage the project. Voice customer access project plans will be reviewed by VBA project manager, support contractor. Status of project will be regularly reported in accordance with the project plan and to the Information Technology Investment Board. Status reports will include a schedule update, actions completed, issues, problems, and next steps. Critical Milestones include:

- Acquisition Planning
- Acquisition
- System Development
- Test and Pilot
- Deployment

The VBA project manager will report monthly to the program manager on the achievement of or deviation from, the cost and schedule goals of developing and implementing the approved call flow architecture. If cost and/or schedule exceeds a 10% negative variance resulting from contractor error, the contracting officer will execute predetermined penalty consideration clauses in the contract. If the negative variance is the fault of the Government, the project manager will escalate the deficiency to the program manager for consideration. The program manager will appropriate action to keep that problem from impacting subsequent incremental tasks or program development or implementation phases.

**Possible Data Source:**

- Government Performance and Results Act (GPRA) of 1993
- Clinger-Cohen Act of 1996
- OMB Capital Programming Guide
- GAO Best Practices

**3.3 Technical Approach**

Please address the following Technical Approach requirements:

- Describe the development approach, (e.g., phased deployment, pilots/prototypes, test plan, development tools, etc);
- Identify specific technical factors likely to affect the project implementation.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.
- Or-
- a rationale for those proposals that will not have any impact on Technical Approach, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

The Virtual Information Center furthers the call processing evolution by viewing call handling on a Service Delivery Network wide basis. The veterans' access to VBA information and services is extended by the application of technology to

provide an expanded homogeneous telephone servicing work force. This expanded work force consists of all of the Veteran Service Representatives located throughout SDN Regional Offices who are then interconnected via a telecommunications network made up of commercially available open system products.

The information center deployment strategy is a three stage process. The first stage is a pilot program. This will be completed in select offices, over a 3 month period. Statistics and customer surveys will be produced to determine effectiveness and deficiencies. The second stage takes the results from the first stage to modify the system to address the identified needs of the user. Finally, the third stage is full regional deployment.

The Virtual Information Center approach uses the combined resources of all Regional Offices within each SDN as a common pool (resource sharing) to answer veteran calls. The VIC system would improve telephone access and increase the number and types of access points for services. Primarily the VIC would receive calls from the N-ARS and attempt to route the call to the Regional Office of Jurisdiction (ROJ). If all Veteran Service Representatives are busy, or all circuits are busy, then the call would be routed to another Regional Office within the SDN. The increased number of Veteran Service Representatives now available within the resource pool increases the number of virtual access points to serve the veteran

**Possible Data Source:**

- Government Performance and Results Act (GPRA) of 1993
- Clinger-Cohen Act of 1996
- OMB Capital Programming Guide
- GAO Best Practices

**4. Customer Acceptance (Weight: 0.154)**

All information technology projects rely heavily on the customer's ability and acceptance of the product. An assessment of customer acceptance is important to the project's ability to accomplish its mission. There are three Customer Acceptance subcriteria: Experience with Technology, Organizational Support, and Ease of Use. Please evaluate and respond to each of the categorical questions.

**4.1 Experience with Technology**

Please address the following Experience with Technology requirements:

- Describe VA (e.g., project, customer) and contractor experience with the technology, as applicable;
- Include the record of performance;
- If available, please provide details of similar technology implementation elsewhere;
- Describe the outcome.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.  
-Or-
- a rationale for those proposals that will not have any impact on Experience with Technology, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

SACONS is a Windows based application. Most end users are familiar with the system and can use the SACONS interface without significant training. Further, CACI provides user support and training courses on SACONS at NAC and VASS. Internal questionnaires indicate a 80% user familiarity with Windows .

CACI has been the leading provider of automated procurement software for the Federal Government for over a decade, first deploying SACONS in 1988, followed by related products. They have been well respected within the Federal Government and employees are familiar and proficient with their software. Over the past decade, SACONS has received letters of recognition and positive feedback from Federal Agencies. (Attachment XXX)

## **4.2 Organizational Support**

Please address the following Organizational Support requirements:

- Describe the level of support for the proposal;
- Address internal operations and management, cross-organizational and external buy-in.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.  
-Or-
- a rationale for those proposals that will not have any impact on Organizational Support, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

VA and other agencies have supplied numerous documents to substantiate support for the initiative. (Attachment XXX) "VBA Initiative Summary" defines the major initiatives that have been implemented in the past. The Under Secretary has issued a statement on the VBA initiatives that supports the pursuit of enhanced telephone systems:

"we have initiated several projects that are part of a national phone strategy that is designed to reduce our blocked call rate and , at the same time, route calls to employees who are in the best position to provide the most comprehensive response." (*Suggested Remarks for the Under Secretary's National Broadcast on the Status of VBA's Phone Initiative.*)

VBA supporting organizations, such as the American Legion, have also been informed of the VBA's intention to pursue advanced telephone systems to support the veteran and resoundingly support the initiative. (Attachment XXX) Fact sheets have been issued by the Deputy Under Secretary for Field Operations, reporting the support for such a initiative in "Fact Sheet: Telephone Access to VBA." (Attachment XXXX)

### **4.3 Ease of Use**

Please address the following Ease of Use requirements:

- Describe the "user friendliness" of the project;
- Describe training, guidelines and instructional documentation;
- Have customer surveys been conducted to determine satisfaction?

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.  
-Or-
- a rationale for those proposals that will not have any impact on Ease of Use, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

Virtual VBA will be developed with the end user in mind. It will create a user-friendly environment where users can easily navigate through veteran claim folders. This will be accomplished through detailed requirement sessions with end users. These requirement sessions will be used to tailor the document management software and to develop the indexing breakout. With C&P staff input, the system can be designed to provide a comfortable "look and feel" to the end user.

In an effort to begin to define end user requirements of the imaging system, a weeklong Joint Requirements Planning (JRP) session was held. Subject matter

experts from both the paper-based claims process and the Washington Regional Offices' prototype for an electronic work environment were involved to determine the system requirements that are needed by end-users. These subject matter experts represented each of the functional areas of C&P claims process that would be affected by imaging.

The JRP sessions included working in a laboratory environment where real claims were worked in the prototype imaging system. A series of use cases were chosen that represent the numerous variables that can occur with original claims. From these use cases, several experts with hands on experience in an electronic work environment and allowed them to provide feedback on the ease of use and the screen requirements that an imaging system would need to provide. These sessions provided high-level user requirements on the following:

- Screen Requirements
- System Interfaces
- Navigation
- Folder Indexes
- Reports
- Workflow Requirements
- Security/Audit Trails
- Workload

More information about the user requirements is located in Appendix XXXX.

Several C&P personnel who participated in these early requirements session also took part in a decision analysis. Staff members familiar with both the current paper environment and the possibilities of the electronic environment. The major result from the decision session was that the employees felt that the electronic environment was 5.45 times more preferable than the current paper environment. (Attachment XXXX) Further, they believed that the new system would be easier to use. 48% of those customer surveyed indicated that they believed an electronic environment would increase efficiency and decrease user error. 68% viewed the initiative as something that would "increase the effectiveness" of VBA personnel.

The Virtual VBA project team also includes personnel to create user manuals, design training programs, and conduct training sessions. Two training programs will be developed. The first program will train the document capture personnel working at the central storage site. These personnel will be trained on recognizing VBA documents, creating electronic folders, indexing requirements, as well as the technical use of the equipment. The second set of training will be conducted at each RO. Employees who will use the system to process veteran claims will be trained on accessing veteran folders, navigating through a claim folder, utilizing system tools for efficiency, and adapting to the new business processed.

## **5. Minimizing Risk (Weight: 0.096)**

Risk is an inherent part of any capital investment. However, project risk can be mitigated. Identifying and controlling project risk can significantly impact a project's success. In this case, information technology risk should be evaluated based upon three risk drivers: Technical, Schedule and Financial.



Please summarize the project's adherence to the following risk requirements:

- Describe known or anticipated risks (e.g., technology being acquired/developed is new to the market or to VA) and how they can be minimized;
- Describe any impacts of known and/or anticipated risks;
- Has a Risk Management Plan been developed to address the management and mitigation of the risks and effects identified during the alternatives analyses? If so, please describe;
- List relevant audits and studies conducted in the past 3 years. Identify who did them and their key findings.

### **5.1 Technical Risk**

Please address the following Technical risk requirements:

- Describe how this project will be conducted, (e.g., in-house development or use of commercial-off-the-shelf (COTS) software systems);
- Describe how technology will be integrated into existing systems;
- Provide information on how you plan to minimize technical risk of systems that are not working as designed.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.
- Or-
- a rationale for those proposals that will not have any impact on Technical Risk, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

This initiative will be implemented by COTS telephony equipment and from vendors that support industry standards, thereby reducing the technical risk of interoperability. The telecommunications industry has made significant advances in supporting industry standards so that equipment from multiple vendors can be interconnected. Because of these advances in common standards and methods of communication it is now possible to implement a telecommunications system that is not dependent upon one vendor. Some of the typical standards include:

- CTI (Computer Telephony Integration): provides for the integration of computers and telecommunications equipment.
- QSIG: a standard messaging protocol used between separate systems.

- TAPI (Telecommunications Application Protocol Interface): a Microsoft standard for communications between computers and telecommunications systems.
- TSAPI (Telephony Server Application Programming Interface): Novell's equivalent to Microsoft's TAPI.

The existing telephone systems all have some form of standard MIS packages that can typically be modified by the end users. Focusing the majority of MIS activities at the primary equipment location will obviate the lack of standardization. The MIS program will enable the managers to determine the telephone activities at each of the Regional Offices that are part of that particular VIC.

This technology is highly reliable and typically is designed for an availability factor of 99.999% (according to Voice Gate, Inc. Telecom Consulting.) None of the required technology is in the beta stage of development or even the first phase of implementation. This initiative, although state-of-the-art, is not "bleeding edge" technology.

As demonstrated in the CBA, this initiative will be implemented on a SDN by SDN basis. Some of the SDNs will require completely new equipment purchases that are based on homogenous vendor equipment. In other cases, it will be necessary to provide significant upgrades in hardware and software. The procurement plans are designed to minimize both cost and technical risk by defining the equipment purchases to each SDN individually over a multiple-year purchase/installation plan.

**Possible Data Source:**

- Government Performance and Results Act (GPRA) of 1993
- Clinger-Cohen Act of 1996
- OMB Capital Programming Guide
- GAO Best Practices

**5.2 Schedule Risk**

Please address the following Schedule risk requirements:

- Describe known or anticipated schedule risks. Provide plan to minimize the risk of schedule over-run;
- Describe what will be accomplished, including life cycle stages (e.g., feasibility study, design, development, implementation, operation, maintenance, evaluation) and other major milestones (e.g., problem definition, develop SOW, award contract, pilot, testing) each year with the proposed funding;
- Describe the corrective actions that will be taken if the project schedule is at variance with the plan;
- Provide the percentage that has been established as the tolerable variance that, when exceeded, results in corrective actions.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.
- Or-
- a rationale for those proposals that will not have any impact on Schedule Risk, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

This project plan calls for VBA to continue operating its ongoing pilots while the development work is completed on this solution. Upon approval of this initiative, the plan calls for initiation of the development of the detailed operational model for all VBA elements. In order to mitigate risk, several approval points have been included in the project cycle.

<b>Phase I – Define End State</b>	<b>Begin Mo/Year</b>	<b>End Mo/Year</b>
Concept of Operations	06/2000	10/2000
National toll free access for Education customers	09/2001	01/2002
SDN 2VIC Pilot	09/2001	12/2002
Expand customer access to N-ARS (6 ROs)	09/2001	02/2002
Loan Guaranty Telephone Access Improvement	03/2002	05/2003
Expand Access to N-ARS nationwide	04/2002	12/2002

<b>Phase 2 – Define VBA Migration Strategy</b>	<b>Begin Mo/Year</b>	<b>End Mo/Year</b>
Document RO telephone asset profile	04/2001	08/2001
Define migration strategy for each SDN	12/2002	04/2003

<b>Phase 3 – Implementation</b>	<b>Begin Mo/Year</b>	<b>End Mo/Year</b>
Integrate SDN plans into national VIC plan	05/2003	07/2003
Execute national VIC plan	08/2003	10/2008

VBA recognizes that a clear and coherent strategy is essential for the successful implementation of this initiative. To this end, VBA has developed a plan for moving VBA toward a defined VBA Telephone Access end-state to support implementation of BPR changes. The development of the VBA Telephone Access system will involve three distinct phases.

The first phase, Define End State, involves the development of a national concept of operations for customer access and supporting business requirements. In order to proceed with this effort, the NTSGB was established to complete the Concept of Operations task. A report entitled “National Concept of Operations for Telecommunications Access to VBA Information and Services” (Attachment A), documents the work of the NTSGB and recommends a new method of operations for VBA.

The first phase will also include the development of a VBA Telephone Access and service model that details the concept from a business and technical perspective. A detailed engineering and business process design is being developed as part of a Virtual Call Center pilot test in Service Delivery Network 2.

A recommended VBA Telephone Access strategy, based on new business processes and technical model developed in this phase, will be presented to VBA senior management for their approval.

In the second phase, Define VBA Migration Strategy, each SDN will be required to develop a migration strategy and plan detailing how it will move toward the approved VBA Telephone Access end-state detailed in Phase One within the time frames established by the Undersecretary for Benefits. Basic infrastructure and management elements for the VBA Telephone Access system will also be established during this phase.

The final phase, Implementation, involves execution of the SDN migration plans defined in the previous phase. The migration plans will define responsibilities for all traditional implementation activities such as site preparation, procurement, installation, testing, and training. This phase will also include the application of specific capabilities required to fully enable the VBA Telephone Access vision. Full implementation of a national level VBA Telephone Access system is contingent on available funding.

Successful and timely implementation of the VBA Telephone Access strategy on a national level is dependent upon the following factors:

- Each SDN will have and abide by a comprehensive strategy that moves it towards the defined national VBA Telephone Access end-state
- Funding will be identified and allocated in order to implement the initiative
- The customer's ability to access status information via the ARS will occur as the corporate database is developed and deployed.
- No PBX.ACD purchases will be made unless consistent with the VBA Telephone Access end-state
- There will be no delays in contractor support for analytical activities
- Current procurement rules will remain in effect

It should be noted that OIM is working closely with the business lines' BPR efforts, providing technical guidance and support as they address issues related to customer access. As these teams further define business requirements regarding electronic access and call centers, the strategy outlined above may be modified.

The key risks that VBA has identified are availability of funding, project management support, and VA support and approval cycle. VBA has put in place a number of mechanisms in order to mitigate these risks. They include:

- VBA has a well developed and supportable cost estimates for the project and developed a full life cycle Cost Benefit Analysis which clearly identifies VBA business results and benefits. In addition, we are instituting earned value analysis in order to monitor cost and schedule progress and will take immediate action on tasks that reach or exceed a 10% variance (the allowable threshold established by OMB). If this threshold is met, the designated project management team will institute the corrective actions.
- VBA has strong senior management support of this mission critical customer access strategy. For example, Deputy Undersecretary for Operations

formally charters each project. The Deputy Undersecretary for Benefits has appointed a senior special assistant for Business Process Reengineering who is instrumental in shaping and initiating and executing customer access projects that are essential to VBA's reengineered business processes.

- VBA utilizes a formal project management methodology, which includes support from a contractor specializing in project management.

VBA utilizes an incremental approach to execute this important initiative. Each project is carefully planned and scoped to ensure incremental benefits and capabilities are delivered throughout the life of this initiative. Taken together, these strategies for funding, business analysis, and project management will mitigate the risks associated with this customer access initiative.

**Possible Data Source:**

- Government Performance and Results Act (GPRA) of 1993
- Clinger-Cohen Act of 1996
- OMB Capital Programming Guide
- GAO Best Practices

**5.3 Financial Risk**

Please address the following Financial risk requirements:

- Describe any financial risk;
- Describe how you intend to minimize the financial risk of low return on investment;
- Detail how would you address cost overruns associated with schedule delays;
- Provide a corrective action plan that will be enforced if the proposal cost is at variance with the plan;
- Provide the percentage that has been established as the tolerable variance that, when exceeded, results in corrective actions.

**Unacceptable:** Unacceptable responses include those that are left blank or do not contain significant data to support conclusions.

**Acceptable:** An acceptable response includes:

- one that answers all of the above stated requirements.
- Or-
- a rationale for those proposals that will not have any impact on Financial Risk, if applicable.

**Good:** Good responses are those that address all of the above stated requirements and include conclusive data to support all statements.

A good response might include, but is not limited to, the following:

The risk of meeting the projected costs is affected by changes in the core assumptions. Changes can have a significant impact on the total life-cycle costs of the alternatives. Therefore, this analysis identified the assumptions that had

the greatest impact on the overall costs of Virtual VBA. These cost drivers were to illustrate the cost sensitivity of changing the assumptions. The following table presents the major cost drivers.

Driver	Cost Impact	Current Assumptions
<p>Concept of Operations</p> <p>The vision of how C&amp;P claims processing should be integrated with imaging technology to most effectively process claims.</p>	<p>The Concept of Operations impacts all of the cost elements in the model.</p>	<p>Assumption: The concept of operations is used as basis for all of the alternatives.</p> <p>Assumption basis: Based on discussions with industry experts who have implemented imaging systems and requirements sessions with VBA users.</p>
<p>Length of Implementation</p> <p>The amount of time needed to fully rollout the imaging system in VBA's environment.</p>	<p>The length of implementation impacts the personnel costs associated with rolling out the system.</p>	<p>Assumption: Virtual VBA will take 2 years to implement and will be completed by the end of FY2002</p> <p>Assumption basis: Based in discussion with industry experts who have implemented imaging systems.</p>
<p>Workload</p> <p>The number of claims and number of pages processed by the imaging system each year.</p>	<p>Workload is used in capacity planning for hardware and imaging software and in determining ongoing maintenance costs. In addition, the workload affects the cost of the outsourcing alternative, which is based on a fixed fee per storage image.</p>	<p>Assumption: Only future Original Claims will be scanned.</p> <p>-Original claims/year is 386,000 -Pages scanned/year is 77,000,000 Images stored/year is 132,000,000</p> <p>Assumption basis: FY 1998 data where 386,000 original claims were received. Number of images is 70% of the pages will be duplexed.</p>

If any of the current assumptions identified in the above table change, the projected costs for the alternatives would be altered. In order to minimize the possibility of cost overruns associated with schedule delays, the Virtual VBA project costs include over \$9 million for project management and oversight in the first three years. Implementation of Virtual VBA must be carefully monitored. The Steering Committee, Risk Management Team, and Project Management Team will be responsible for monitoring costs and schedule variances and responding to changes. Costs have been included for a large amount of equipment and staff to account for all possible functional and technical areas, this includes over 150 separate cost elements. These elements are contained in Appendix A2. In addition, mitigating strategies have been included in this application to monitor cost risk. These strategies include the establishment of the Steering Committee and Project Management Team and the adherence to the Risk Management Plan. These strategies in conjunction with a comprehensive cost estimate will keep costs within a 10% variance.

#### Possible Data Source:

- Government Performance and Results Act (GPRA) of 1993
- Clinger-Cohen Act of 1996
- OMB Capital Programming Guide
- GAO Best Practices

Table 8: IT Data Validation Form

Three Pesky Questions	Yes/No	Comments
1. Does the investment in a major capital asset support core/priority mission functions that need to be performed by the Federal Government?		
2. Does the investment need to be undertaken by the requesting agency because no alternative private sector or government source can better support the function?		
3. Does the investment support work processes that have been simplified or otherwise redesigned to reduce costs, improve effectiveness, and make maximum use of commercial, off-the-shelf technology?		

Document (Documents must be provided, or their absence explained)	Provided? (Yes/No)	Comments
1. Cost Benefit Analysis		
2. Pilot/Prototype Data		
3. Performance Measures		

SCORE: 0=UNACCEPTABLE 1=ACCEPTABLE 2 = EXCELLENT		
(Items marked with a double asterisk (**)) must be addressed with an acceptable response)		
	Score	Comments
<b>1. Mission</b>		MINIMUM =1 MAXIMUM=4
1.1 Organizational Improvement** a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
1.2 One-VA Service a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
Subtotal	0	
<b>2. IT Architecture</b>		MINIMUM =3 MAXIMUM=6
2.1 Standards** a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
2.2 Interoperability** a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
2.3. Security** a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
Subtotal	0	
<b>3. Project Management</b>		MINIMUM =2 MAXIMUM=6
3.1 Acquisition Strategy a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
3.2 Project Structure** a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
3.3 Technical Approach** a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
Subtotal	0	

<b>4. Customer Acceptance</b>		MINIMUM =1    MAXIMUM=6
4.1 Experience With Technology a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
4.2 Organizational Support a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
4.3 Ease of Use a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
Subtotal	0	
<b>5. Minimizing Risk</b>		MINIMUM =3    MAXIMUM=6
5.1 Technical** a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
5.2 Schedule** a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
5.3 Financial** a. Blank or not addressed=0 b. No effect or limited explanation=1 c. Justification with analysis=2		
Total Points	0	
<b>Total Score (Minimum of 14 Needed to Pass)</b>	0	

\*\* **Critical Items.** A minimum score of one is needed for each attribute or the proposal will be returned to the applicant.



## C. LEGACY SYSTEM INVESTMENT PROPOSAL CRITERIA GUIDE

Definition
Legacy System—Fully developed IT system that requires continued evaluation for flexibility of integration with newer systems to ensure business applications and infrastructure align with strategic goals.

**Legacy System proposals should address the following five criteria to meet the requirements of the VA Capital Investment Planning Process.**

- Mission
- Customer Service
- IT Architecture
- Return on Taxpayer Investment
- Risk Analysis

Proposal applications should also contain the information requested in Chapter III, Part I of the Capital Investment Proposal Application.

Please note: All statements and assumptions should be supported by data calculations and documentation. Please attach all supporting documentation as appendices to the proposal. The Data Validation form (Table 9, page 105) for Legacy Systems proposals is included.

### 1. Mission

- State how this system supports and/or integrates with the VA Strategic Plan and the program (e.g., VHA, VBA, NCA, Staff Offices) business and administrative plans. Identify any applicable goals or objectives and reference resource documents.
- Provide information on performance measures that are in place. If performance measures are not in place, provide plans to address and evaluate these measures.

**Definitions and examples are in Chapter IV-B, Section 1.**

## 2. Customer Service

Identify ways in which this system addresses the five sub-criteria of Customer Service:

- Quality
- Waiting Time
- Increase in Customers
- Increased Benefits
- Increase Access to Existing Customers

**Definitions and examples are in Chapter IV-A, Section 1.**

## 3. IT Architecture

- Provide dates of system deployment and furnish a schedule of planned modernization of all existing system components.
- Show the extent to which the system is consistent with VA's Technical Architecture, dated May 1999. Describe how this system impacts other applications in terms of interoperability and functional requirements. *Provide written documentation from your VA IT Architecture Team representative, confirming project adherence to VA's established performance principles, models and standards.*
- Describe or indicate the current status of the Security Plan for this legacy system that ensures appropriate confidentiality, integrity and availability. This includes rules of the system, training, personnel controls, incident response capability, continuity of support, technical security and system interconnection.
- Provide current accreditation status.
- Cite any areas of nonconformance to existing VA and Administration/Staff Office policies for security, privacy and record retention.
- Summarize key life cycle information security milestones for the initiative, including dates and associated costs.
- Identify the Project Security Officer include phone number and internet address.

**Definitions and examples are in Chapter IV-B, Section 2.**

#### **4. Return on Taxpayer Investment**

Provide the four components of Return on Taxpayer Investment (ROTI).

- Cost-Effectiveness Analysis
- Alternatives Analysis
- Cost Savings Analysis
- Non-Quantifiable Benefits

Definitions and examples are located in Chapter III, Part II, Section 2 - Return on Taxpayer Investment. Templates and guides for the Cost-Effectiveness (Chapter IV-D) and Alternatives Analysis (Chapter IV-E) have been created to assist proposal writers.

Please note: If a cost benefit analysis (CBA) has been conducted in the last three years, refresh your analyses with up-to-date information to reflect changes in projected costs, benefits or major requirements. At least two viable alternatives must be evaluated. These include status quo and contracting out. In the absence of a CBA, a cost-effective analysis (CEA) should be provided to show a comparison of cost for economies of scale, including an assessment of technical and financial risks.

If a CBA analysis has not been conducted, a proposer must provide an explanation why one has not been completed and when one will be completed. At a minimum, a CEA analysis as described in section 4 must be completed every three years.

**Definitions and examples are in Chapter IV-A, Section 2.**

#### **5. Risk Analysis**

- Describe known or anticipated risks, including technical and financial risks, and how they can be minimized.
- Develop a Risk Management Plan to address the management and mitigation of the risks.
- List relevant audits and studies conducted within the past 3 years. Identify who did them and their key findings.

**Definitions and examples are in Chapter IV-B, Section 5.**

**Table 9: Legacy System Data Validation Form**

<b>Validity Scoring Table</b>		
Score: 0=UNACCEPTABLE 1=ACCEPTABLE 2=GOOD		
	<b>Score</b>	<b>Comments</b>
<b>1. Mission</b>		<b>(Max = 4 Min = 1)</b>
<b>Total Points</b>		<b>Pass Fail</b>
<b>2. Customer Service</b>		<b>(Max = 10 Min = 5)</b>
2.1 Quality *		
d. Blank or not addressed = 0		
e. No effect or limited explanation = 1		
f. Justification with analysis = 2		
2.2 Waiting Time		
d. Blank or not addressed = 0		
e. No effect or limited explanation = 1		
f. Justification with analysis = 2		
2.3 Increase in New Customers		
d. Blank or not addressed = 0		
e. No effect or limited explanation = 1		
f. Justification with analysis = 2		
2.4 Increased Benefits		
d. Blank or not addressed = 0		
e. No effect or limited explanation = 1		
f. Justification with analysis = 2		
2.5 Increased Access to Existing Customers *		
d. Blank or not addressed = 0		
e. No effect or limited explanation = 1		
f. Justification with analysis = 2		
<b>Total Points</b>		<b>Pass Fail</b>
<b>3. IT Architecture</b>		<b>(Max = 6 Min = 3)</b>
<b>Total Points</b>		<b>Pass Fail</b>
<b>4. Return on Taxpayer Investment</b>		<b>(Max = 8 Min = 4)</b>
4.1 Cost-Effectiveness Analysis *		
a. Blank or not addressed = 0		
d. No effect or limited explanation = 1		
e. Justification with analysis = 2		
4.2 Alternatives Analysis *		
d. Blank or not addressed = 0		
e. No effect or limited explanation = 1		
f. Justification with analysis = 2		
4.3 Cost Savings Analysis *		
d. Blank or not addressed = 0		
e. No effect or limited explanation = 1		
f. Justification with analysis = 2		
4.4 Non-Quantifiable Benefits		
d. Blank or not addressed = 0		
e. No effect or limited explanation = 1		
f. Justification with analysis = 2		
<b>Total Points</b>		<b>Pass Fail</b>
<b>5. Risk</b>		<b>(Max = 6 Min = 3)</b>
<b>Total Points</b>		<b>Pass Fail</b>
<b>Total Validation Score</b>		<b>Pass Fail</b>

\* Critical elements that must pass validity (a score of 1 or 2)

## D. COST-EFFECTIVENESS ANALYSIS GUIDE

Developing a cost effectiveness analysis requires identifying key project cost drivers. This guide provides in depth instructions on conducting a cost-effectiveness analysis and directions for using the CEA template. It includes instructions on how to establish, value and evaluate various projects and alternatives.

Be sure to attach the following documents to the Capital Investment Proposal Criteria portion of the Application (**Chapter III, Part II**):

Deliverable	Directions
<b>Cost-Effectiveness Analysis</b>	Print/Attach a copy of the summary page of the Cost Effectiveness Template to Chapter III, Part II, Section 2.1 <b>and</b> use the data derived from the CEA template to complete Section O of the Application (Chapter III, Part I)
<b>Supporting Data and Calculations</b>	Print/Attach all data sources and calculations as an attachment to the proposal.

### Cost-Effectiveness Theory

Cost-effectiveness is a useful economic method for evaluating competing alternatives. OMB Circular A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, defines cost-effectiveness as:

A systematic quantitative method for comparing the costs of alternative means of achieving the same stream of benefits or a given objective.

VA uses this method for its Capital Investment Methodology to determine if, on the basis of a life-cycle cost analysis of competing alternatives, a selected project has the lowest cost for a given amount of benefits. Cost-effectiveness analysis evaluates the total life-cycle costs per project, then compares it against other viable project alternatives. This analysis produces a selection criterion by which investment decision can be determined.

### Cost-Effectiveness Process

Cost-effectiveness analysis is one portion of the total VA decision-making process. It is located within the major criterion: Return on Taxpayer Investment. Return on Taxpayer Investment evaluates cost-effectiveness, alternatives, cost savings, and non-quantifiable benefits. Together, these analyses determine the best investment option available that meets the benefits required by the proposal's goals and mission, and those of VA.

Cost-effectiveness analysis is a two step process. The first step is to collect and analyze significant cost data to determine the costs of achieving the benefit or objective under each alternative. This is a very important step in the process since all calculations and impending decisions will be based upon the quality of the data collected. Cost data collection can be done by utilizing VA data source information, project appraisals, historic figures, among others. Any figures utilized in the process, however, need to be substantiated. Proper documentation ensures the validity of the proposal and should be included as appendices to the proposal. After all the cost data have been determined, figures are inputted into the CEA template, provided by VA. This template is designed to ensure consistency within the proposal submission process. The CEA template should include cost data for each alternative considered.

The second step in the process consists of comparing the costs of all alternatives. This fiscal analysis is a very important part of the capital investment process, in that it produces the best financial analysis to assist in determining which of the project alternatives to propose for funding. If all alternatives have been evaluated on an even-playing field, this step should result in identifying the alternative that achieves the intended objective at the least cost to VA. This information is then summarized in the Alternatives Analysis template, to assist in determining the best available project option that meets the stated objectives.

### **Getting Started on the Template**

The template included for use in calculating cost effectiveness has been designed in Microsoft Excel 97. It will run on any Pentium-based processor, but a speed of 233MHz or higher is strongly recommended. Other minimum system requirements for use include:

- 64MB RAM Memory (96MB+ are strongly recommended)
- Windows 95 or above
- 10MB Hard Drive Space allocated to program
- Microsoft Excel 97
- CD ROM Drive (if loading from CD) or
- Internet Browser with Intranet Access (if downloading from internal ITIPS on website)
- Mouse

If downloading the file from the Intranet, it will be downloaded in a self-extracting zipped format. Instructions for downloading and opening the file are below. If loading or copying from a CD, proceed to the section "Starting the Template".

### **Unzipping the Template**

From the designated location, download the zipped file (CEA Template.exe) to your computer. Once downloaded, double-click with your left mouse button to

begin the self-extraction process. You will see a message box appear prompting you for the location to which you would like to store the file. Select the appropriate directory and press the “Unzip” button on the right of the message box. You should see the Progress Bar unzipping the file “CEA Template.xls” and a prompt that 1 file has been unzipped successfully. Close the message box. The Excel file is now stored in the selected directory ready for use.

## Starting the Template

Open the file named “CEA Template.xls”. Since the file is approximately 7.4MB in size, it may be necessary for you to close other open applications depending upon the amount of RAM you have available. The large size is due to the underlying complexity of the calculations in conjunction with Visual Basic programming. *Please note that it may take a minute or more to open the file if your computer system does not meet the requirements.*

When the file opens, it will automatically take you to a start screen similar to the one shown below. **Be sure to “Enable Macros”.**

Step 1: Enter the Project Name in the designated box at the top left of the screen

Step2: Enter the Project Number in the designated box at the top left of the screen. These will automatically be generated on each successive screen. *Please note that the number you enter will be replaced with a number provided by the CIO/VACIP, which will remain through the life-cycle of the asset.*

Step 3: Input the fiscal year cycle for which you are performing the analysis. This information should go in the designated light blue box near the bottom left of your screen.

The screenshot shows the start screen of the CEA Template Excel spreadsheet. The interface is set within an Excel window with the following elements:

- Project Name:** A text box at the top left.
- Project Number:** A text box below the Project Name.
- Facilities Selection:** A list of project types with radio buttons:
  - Facilities
  - Medical & Non-Medical Equipment (Non-IT)
  - Information Technology Acquisition
  - Energy Savings Performance Contract (ESPC)
  - Enhanced Use Lease
  - Sharing Agreement
- Select:** A blue button below the facilities list.
- Fiscal Year Cycle:** A text box containing the value 2002.
- Current Discount Rate:** A text box containing the value 7.80%.
- Current Inflation Rate:** A text box containing the value 3.80%.
- Note:** A red text box stating "Note: Use of the CEA Guide is necessary to complete this template".
- Clear All Worksheets:** A red button.
- View Summary Sheet:** A green button.
- Seal:** The official seal of the Department of Veterans Affairs is displayed on the right side.

The spreadsheet grid shows columns A through O and rows 1 through 34. The bottom status bar indicates "Select destination and press ENTER or choose Paste".

Step 4: Be sure that the correct year has been inputted into the Fiscal Year Cycle box. (The default is set for 2002)

Step 5: Below the Fiscal Year Cycle box, are boxes to input the current Discount Rate and Current Inflation Rate. These are defaulted to 7% and 3%, respectively. If it becomes necessary to change these, do so in these boxes. These rates transfer throughout each worksheet automatically and all calculations will reflect the number that has been inputted into these boxes. However, if changes are made to either the Discount Rate or the Inflation Rate, it is necessary to note and justify this change in the proposal. *Please write justification in Part II, Section 2.1 of the application.*

Step 6: Finally, select the button marked "Clear All Worksheets" if you are beginning a new analysis. This will clear any existing numbers and calculations throughout the workbook. However, if you have previously saved your analysis and are revisiting the template, do not select this button. All previously saved work will be lost. If this occurs, simply close the file without saving and restart the template.

### **Creating a Proposal**

Depending upon the type of investment you are analyzing, select the option button corresponding to that category and press the select button. (See special instructions for Enhanced-Use Lease and Enhanced Sharing Agreement categories later in this manual.) When you press the select button, a new pre-formatted sheet will appear.

For each alternative, there are 8 sections to be completed:

- 1) Previous Year(s) Expenditures (Any expenditures pre-dating the fiscal year cycle.)
- 2) Acquisition Costs
- 3) Acquisition Savings
- 4) FTE Savings (during acquisition)
- 5) Recurring Costs
- 6) Recurring Savings
- 7) FTE Savings (recurring)
- 8) Residual Value

All sections are to be completed in current dollar amounts with the exception of FTE Savings, which are calculated as the number of FTEs saved during each corresponding year.



## Completing the Costs, Savings, & Residual Value Sections

This template is not a means of determining cost and savings data. These data must be researched and coordinated prior to insertion into the template. Once the costs and savings have been categorized, they are ready for insertion.

**All work is entered in current dollars on the Current worksheets only – the Inflated and Discounted worksheets are generated automatically.**

By category, input the values in the lightest blue cells (light aqua) corresponding to the appropriate category. DO NOT attempt to input information into any other colored cell. All other colored cells are self-generating. When inputting values on this worksheet, input the costs in current dollars, *as if you had to make the purchase today*. That is, even if the cost occurs in Year 10 for 100 PCs, input the cost of 100 PCs if you purchased them today. This is also true for savings. Calculate all savings as if they were presently incurred. For example, if by purchasing a new piece of medical equipment, you can perform the service with one less technician, the present salary of the eliminated FTE would appear as a savings under *Personnel and Compensation* for the anticipated life of the machine. Finally, the same procedure will be used for Residual Value. If you plan to sell the aforementioned machine after 10 years, you should estimate the current market value of a 10 year old machine with specifications similar to the new one. This value will be inputted under Year 10 of the Residual Value section. You must complete the necessary information for each alternative under consideration.

Remember, as you complete the “Current” worksheet for the investment category, other information is automatically generated. A sheet of “Discounted” information is created to compare one alternative against another in “real” dollars. This “discounted” value will be of most importance to the analyst when comparing alternatives since it accounts for varying dates of expenditure. Secondly, a sheet of “Inflated” information is generated. This is to assist the analyst when budgeting for the full lifecycle of costs. While engineering services may cost approximately \$1.5 million today for a specific type of renovation, they will certainly be more expensive in 15 years when your new hospital is scheduled for its first renovation. This sheet will assist you with estimating future budgets.

Also, remember to match financial and economic life of the asset. If you expect to use the asset for 10 years, then conduct the financial analysis through the 10<sup>th</sup> year and, if applicable, input the residual value at the 11<sup>th</sup> year and discount back (see Updates to the Guide #2, on page 4 of the *Guide*).

Across the top of each sheet will appear a series of buttons to navigate the workbook. These buttons will select the worksheets described above. Additionally, the “Current” worksheets will each contain a *Clear* button applicable to clearing only the worksheet you are in.

Once you have completed the applicable sections, you may view other worksheets or return to the Start sheet where you can move to the Summary sheet.

### **Special Instructions for Enhanced-Use Leases and Enhanced Sharing Agreements**

When you select either an Enhanced-Use Lease (EU) or Enhanced Sharing Agreement (ESA) category of investment, the worksheet will require additional information. Each of these categories will allow for just 1 alternative to be completed. This should be completed just as described above. Additionally, sources of revenue associated with these options must be calculated. Below the cost and savings section, there is a section where revenue information can be inserted.

In the far-left column titled *Additional Sources of Revenue*, identify the source of revenue. In the lightest blue columns to the right, input the annual revenue stream as if it were realized today (i.e., use current dollars). For example, if by leasing two floors of a new hospital to an outside contractor you gain annual revenue of \$2 million for each of the next five years, you will input \$2M into the corresponding revenue cells for the next five years.

Often, you will want to consider other alternatives against an EU or SA category. Simply return to the Start sheet, and select the appropriate category for an additional alternative evaluation. The direct comparisons will appear on the Summary sheet.

### **Viewing and Comparing Results**

At the top of each alternative section on each worksheet, a summary of associated costs, savings, revenues and residual values will appear. This is useful to analyze the alternative, however all alternatives should also be considered against one another.

Return to the Start sheet. In the lower right-hand corner is a button that when selected will direct you to the Summary sheet. Here you can view the results of each alternative as *Current*, *Net Present*, and *Inflated* values in Base Values and Total Values. The Total Values of Alternatives is the sum of the Base Values of Alternatives and Previous Year(s) Expenditures. This page is self-generating and should not be altered. If Enhanced-Use or Enhanced Sharing investments were considered, they will appear at the end of each of the other categories for easier comparison.

**Before printing, remember to set your print area or else you will print several hundred pages.**

## E. ALTERNATIVES ANALYSIS GUIDE

Alternatives analysis is an evaluation of all feasible and reasonable alternatives meeting the proposal vision and goals. Comparing alternatives helps the proposal writer identify potential weaknesses, as well as solutions for such weaknesses, prior to project funding. In addition, alternatives analysis can strengthen the position for proposing the selected project by examining several alternatives and showing that the selected project yields greater returns, stronger linkage to strategic goals or lower costs for the organization.

The development and refinement of alternatives is an iterative process. Preliminary analysis of each alternative can include the development of:

- High-level project plans
- Assumptions
- Advantages/Disadvantages
- Risks
- Initial Cost Estimates
- Initial Benefit Estimates

Be sure to attach the following documents to the Capital Investment Proposal Criteria portion of the Application (Chapter III, Part II, Section 2.2 Alternatives Analysis under Return on Taxpayer Investment):

Deliverable	Directions	For Additional Help
<b>Alternatives Analysis Template</b>	Print/Attach a copy of your completed alternatives analysis template to Chapter III, Part II, Section 2.2	See Chapter IV-A, Section 2.2
<b>Summary</b>	Print/Attach a summary of your alternatives analysis to Chapter III, Part II, Section 2.2	See last page of this section of the guide for additional details (page 115)

### Alternative Requirements

OMB Circular A-94 delineates the minimum number of alternatives that should be investigated. VA subscribes to this list and emphasizes that the minimal requirements necessary for submission to VACIB are the following:

Information Technology – At least six alternatives are possible, but a **minimum of 3 viable alternatives is necessary** to complete the alternatives analysis. One of the alternatives that must be addressed is **contract out** for the function. Other alternatives that may be considered are to buy commercial off-the-shelf

(COTS), share, develop capability in-house, or develop architecture options for IT hardware initiatives. **Status quo** (continue with no change) must be provided for a comparative baseline. It may also be considered a viable alternative. **Leasing** must be addressed, in discussion only, if it is not considered a viable alternative.

Infrastructure – **At least seven alternatives are possible, but a minimum of 4 alternatives must be considered**, one of which must be **status quo** to use as a comparative baseline. Two of the alternatives that must be investigated to address OMB concerns are **renovation** and **contract out**. In addition, there are four other alternatives that can be pursued by the investment proposal team: build, buy, lease, and share.

**Lease** or GSA space assignments- the alternatives to be considered are: continue the current lease or space assignment, purchase an existing facility, build or renovate a facility on VA owned or purchased land or pursue Enhanced-Use.

Potential alternatives for the project categories include, but are not limited to the following options:

Project Category	Renovate	Build	Buy	Lease	Status Quo	Share	Contract for Function	VA Developed Software	Total Options
Facilities	x	x	x	x	x	x	x		7
Lease		x	x		x	x	x		5
Non-Medical Equipment			x	x	x	x	x		5
Medical Equipment			x	x	x	x	x		5
IT			x	x	x	x	x	x	6
Enhanced-Use		x	x	x	x	x			5
ESA			x		x	x	x		4
ESPC	x	x	x		x		x		5

In addition to exploring all viable alternatives, the following four criteria should be met when evaluating each potential investment:

- **Ensure that the same information set is provided for each alternative** – evaluate each alternative using the same criteria (as demonstrated in the template).
- **Ensure that all information gathered is documented** – be sure to include any data sources and calculations that are used to support analysis.
- **Ensure that internal valuations are comparable to industry standards** – use generally accepted estimates when evaluating expected costs and benefits.

- **Ensure that the impact variables or assumptions on each alternative are identified** – document and explain all assumptions and any variables that are not explicitly stated in the analysis.

### Complete the Template

The accompanying Microsoft Word® template (Alternatives Analysis Template.doc) will provide the proposal writers with a format that they can use to assemble the alternatives analysis. The template is based on the Decision-Making Hierarchy for FY2002 (See *Guide*, Figures 1&3).

Populating the table should begin after the Capital Investment Proposal Criteria (Chapter III, Part II) have been reviewed, analyzed and completed. This includes identifying performance measures and benefits (quantitative and qualitative), and conducting a Cost-Effectiveness Analysis, and Risk analysis for each alternative.

**The information for the PROPOSED alternative should be listed in the Alternative #1 column.** Further, if there are more than four viable alternatives, create another copy of the template listing the additional alternatives. To do this, save/print the results of the first four, then rename the columns with the additional alternatives, and save/print the second set. **On all copies, be sure to replace 'Alternative #\_' (located across the top of the template) with the actual name of the identified alternatives.** For example:

Alternatives	Status Quo	Lease	Renovate	Build
--------------	------------	-------	----------	-------

For each alternative, describe how it affects each of the sub-criteria from the decision model. This analysis should be completed using the Capital Investment Proposal Criteria document (see Chapter III, Part II).

For example:

Criteria	Alternative #1	Alternative #2	Alternative #3	Alternative #4
Strategic Alignment -- One VA	Consistent with VA/VBA mission and goals – Ease of Access, Customer Satisfaction, Prompt Delivery of Services & Benefits. VHA proposal to fund construction costs up to \$2.5 million for <i>Enhanced-Use</i> Lease. Sharing of existing VAMC programs	Does not address One VA	Consistent with VA/VBA mission and goals – Ease of Access, Customer Satisfaction, Prompt Delivery of Services & Benefits Sharing of existing VAMC programs	Does not address One VA

## Evaluating the Alternatives Analysis

During the validation phase, the panel will review and score the quality of information, appropriate supporting documentation, and the summary results based on the information provided in the template. Further, they will evaluate whether all feasible alternatives were addressed with completeness.

The summary should:

- Describe in detail the best alternatives to the proposed investment along with the rationale for choosing or not choosing it.
- Describe why the selected alternative is the best option for meeting program needs.
- Include a description of the capacity of alternatives to handle the anticipated demand with associated cost. The alternatives could be larger or smaller investments than the one being proposed, or require alternative modes of delivery.
- Demonstrate that each alternative was compared using the same types of analysis.

## F. RISK ANALYSIS GUIDE

Developing a risk analysis requires the proposal writer to identify risks, define controls to mitigate the identified risks, and establish risk factors. This guide provides examples and definitions of various risks that can affect projects as well as examples of controls to mitigate them. In addition, this guide provides instructions on how to establish the likelihood and impact scores for each risk, including instructions on how to complete the corresponding risk template.

Be sure to attach the following documents to the Capital Investment Proposal Criteria portion of the Application (Chapter III, Part II, Section 4 Risk):

<b>Deliverable</b>	<b>Directions</b>	<b>For Help</b>
Risk Score	Print/Attach the Risk Summary Sheet after scoring all of the Risk categories in the Risk Template to Chapter III, Part II, Section 4.1	See Chapter IV-A, Section 4.1
Quality of Risk Analysis	Complete this section in Chapter III, Part II, Section 4.2	See Chapter IV-A, Section 4.2
Control Plan	Complete this section in Chapter III, Part II, Section 4.3	See Chapter IV-A, Section 4.3

### Background

Risk is an inherent part of any capital investment. Project risk, left unattended can be costly. However, project risk can be mitigated. Identifying and controlling project risk during the proposal development stage can have a significant impact on the project's overall success. For this proposal, there are six significant risk components: Financial, Technical, Operational, Schedule, Legal & Contractual, and Organizational risks.

### Risk Evaluation Process

The risk evaluation process is composed of three steps: identifying and scoring risks, justification and control. The first step in the process is the identification and scoring of the project risks. The risk template is a guide to assist in the identification and scoring of the risks associated with the proposed project. Each identified risk needs to be scored based upon an assessment of likelihood and impact. The end result of this step is a risk score for both the proposal and each of the individual risks.

Once the risks have been identified and scored, the second step is justification. This step is evaluated within the “Quality of Risk Score,” located in the Capital Investment Proposal Criteria template. This step provides an opportunity for the proposal team to define their rationale and conclusions regarding each individual risk.

The final step is establishing a control plan to mitigate associated risks. This step is evaluated within “Quality of Risk Control Plan,” located in the Capital Investment Proposal Criteria template. This step requires the proposal team to determine risk controls based upon their available resources, and identify responsible parties.

These steps combined deliver a complete project risk assessment, providing an overview of anticipated project risks. This guide presents the tools needed to accomplish this task, including a risk template and examples of risk controls.

## **Identify Risks**

There are six areas of risk to analyze when determining the overall risk score of a project. They include:

- Financial
- Technical
- Operational
- Schedule
- Legal and Contractual
- Organizational

### **1. Financial Risk**

Financial risks are any risks that could ultimately cause VA to pay out unexpected monies. These risks are usually thought of in dollar amounts when considering the impact variable. Financial risk can result from, but are not limited to:

- Cost overruns;
- Outlays to settle legal disputes;
- Costs of lost information/data;
- Hardware or software failure and replacement;
- The potential cost of reliance upon a single vendor without cost controls.



## 2. Technical Risk

Technical risk addresses the risk posed by the inability of the proposal to accurately predict the lifecycle of projects. They can result from the failure to attain expected benefits from the project, inaccurate project cost estimates, inaccurate project duration estimates, failure to achieve adequate system performance levels, failure to adequately integrate a new system with existing hardware and software or failure to integrate organizational procedures or processes.

Technical risk can be determined by four primary factors:

### Project Size

- Number of members on the project team
- Project duration
- Number of organizational departments involved in project
- Size of programming or construction effort (e.g. hours)

### Project Structure

- New system, construction or renovation of existing system(s)/buildings
- Organizational, procedural, structural, or personnel changes resulting from the system
- User perceptions and willingness to participate in effort
- Management commitment to project
- Amount of user information in project development effort

### Project team's experience with technology or business area

- Familiarity with proposed business or application area
- Familiarity with target-hardware, software development environment, tools, and operating system or familiarity with construction process
- Familiarity with building similar systems or buildings of similar size

### User group's experience with development projects

- Familiarity with information systems development process or construction development process
- Familiarity with proposed application or business area
- Familiarity with similar systems or projects

## 3. Operational Risk

Operational risk is the degree to which a proposed project alternative solves business problems or takes advantage of business opportunities. Will it do what it is expected to do? The business case for any project can be enhanced if it can be linked to the overall strategic plan or the information management plan at the Administration or field level. Include information about how the proposed

alternative will affect organizational structures and procedures. Alternatives with broader impacts on existing organizational structures or procedures are more risky than those with lesser or more narrow impacts. Be clear about how the alternative will fit into the day-to-day operations.

#### **4. Schedule Risk**

Schedule risk is the degree to which the expected time frame and completion dates for all major activities within a project meet organizational deadlines and constraints for effecting change. Concerns might include, but are not limited to:

- Governmental regulation deadlines,
- Resource availability within time frame.

Consider scheduling tradeoffs, outsourcing, or altering the technical development environment.

#### **5. Legal & Contractual Risks**

Legal and Contractual risks refer to the project ramifications that result from the construction of a building, purchase of a machine or service, or development of an information system. Risks may include, but are not limited to:

- Copyright infringements;
- Non-disclosure;
- Labor laws;
- Anti-trust (limiting information sharing);
- Foreign trade regulations (limiting encryption techniques);
- Malpractice;
- Inadequate building standards;
- Financial reporting standards;
- Software ownership in joint ventures;
- License agreements;
- Non-disclosure with partner.

Risks are increased when outside organizations are involved.

#### **6. Organizational Risk**

Organizational risk is determined by key stakeholders within the organization and their view of the proposed alternative. Organizational risk can be determined by, but is not limited to:

- Redistribution of power is the single greatest element that will increase organizational risk.

The greater the number of stakeholders from whom you can achieve buy-in (from the top management to the users), the lower your organizational risk.

*Reminder: Risk is not the only consideration for alternative evaluation. Projects with high construction costs and/or high technical risk may be selected if the project is deemed to be a strategic or operational necessity. Other projects may be selected simply because they have low risk and require few resources. Still others may be selected because of the power or persuasiveness of the manager proposing the system. Whenever these criteria are used to select a project, risk increases – even for the low budget, low resource projects since other criteria were not applied in the assessment phase.*

## **Developing Risk Control Plans**

One cannot discuss risk without also discussing controls. Controls are those procedures or activities put into place which mitigate (or minimize) risks. Rarely can risk be completely eliminated, however, it can be controlled. Listed below are some generic risk mitigation strategies that the analyst may use to evaluate the likelihood of risk occurrence. If these controls are in place in a project plan, then the likelihood of risk decreases and the alternative becomes more attractive.

### **Financial Controls**

- Perform cost-benefit and economic analyses;
- Implement a rigorous investment management program;
- Utilize Earned Value methodology during project lifecycle to control costs;
- Purchase liability insurance or bond by contractor;
- Establish clear benefits to be realized;
- Use competitive bidding for each increment of project design;
- Implement an Investment Review Board.

### **Technical Controls**

- Use development lifecycle methodology/structure;
- Use project planning/management software;
- Use appropriately trained personnel;
- Break the project into increments;
- Isolate custom design portions of the project;
- Assign Project manager to be accountable for the project.

### **Operational Controls**

- Use a strategic information management framework;
- Establish clear requirements and objectives;
- Use change management program to minimize organizational disruption;
- Adequately train and provide follow on support;
- Establish performance metrics and reporting system to monitor those metrics.

### **Schedule Controls**

- Use contractual penalties for missed deadlines;

- Use project management software;
- Set realistic expectations and manage those expectations;
- Use outsourcing to augment scarce internal resources.

### **Legal and Contractual Controls**

- Create a software license management program;
- Review all applicable laws;
- Keep contracting personnel apprised of potential legal concerns and possible contract disputes;
- Maintain good communication with contracting personnel to ensure minimal opportunity for contract dispute;
- Provide multiple opportunities within a contract for termination.

### **Organizational Controls**

- Obtain “buy-in” from top management very early on in planning stages
- Work closely with end-users to establish requirements for new system
- Communication

### **Impact and Likelihood**

Once risks and controls have been identified, it is important to determine the level of impact and likelihood of those risks on a given project. Examining the impact and likelihood will result in a “risk factor,” which can be applied to each risk that was originally identified.

First, determine the **impact** that a particular risk would have on the project if it were realized. This rating will occur on a scale of 1 through 3, with one implying minimal impact and three implying the most catastrophic impact. Second, determine the **likelihood** of risk occurrence. While the impact of a particular risk may be high, the likelihood of it taking place may be minimal. Use a probability of impact where 1 indicates minimal likelihood of occurrence and 3 indicates a certainty of occurrence. Finally, multiply the two together to arrive at a **risk factor for each risk identified**:

$$(\text{Impact} \times \text{Likelihood}) = \text{Risk Factor}$$

For example, the construction of a clinic will be very important to VA for meeting the needs of a growing pocket of veterans in the market area. It is estimated that the clinic will require 19 months to complete. Construction will begin in June 2000. To determine the SCHEDULE RISK, the impact and likelihood must be determined for that individual risk. If the VA fails to complete the hospital by June 1, 2002, the **impact** will be significant. You might assign it a medium level risk, or a 2 on a scale of 1 to 3. However, the risk of the project going beyond the deadline is small since you have a 19-month project with 24 months to complete.

Therefore, you might assign a **likelihood** rating to *schedule risk* of low level risk, or a 1 on a scale of 1 to 3. Calculating your **Risk Factor** yields a 2 (e.g., Impact of 1 multiplied by Likelihood of 2 equals 2).

Using this same scale across all identified risks to an alternative, and subsequently summing all risk factors will provide the analyst with a final **Risk Rating** for a particular project alternative. Taking the risk rating and dividing by the number of identified risks yields a **Risk Score**.

For example:

Identified Risks	Likelihood	Impact	Risk Factor
Cost overruns	2	2	4
Unfamiliar with similar systems	1	2	2
Limited resources	1	1	1

**Risk Rating** (sum of risk factors) = 7

**Risk score** (risk rating divided by the number of risks) or  $7/3 = 2.33$

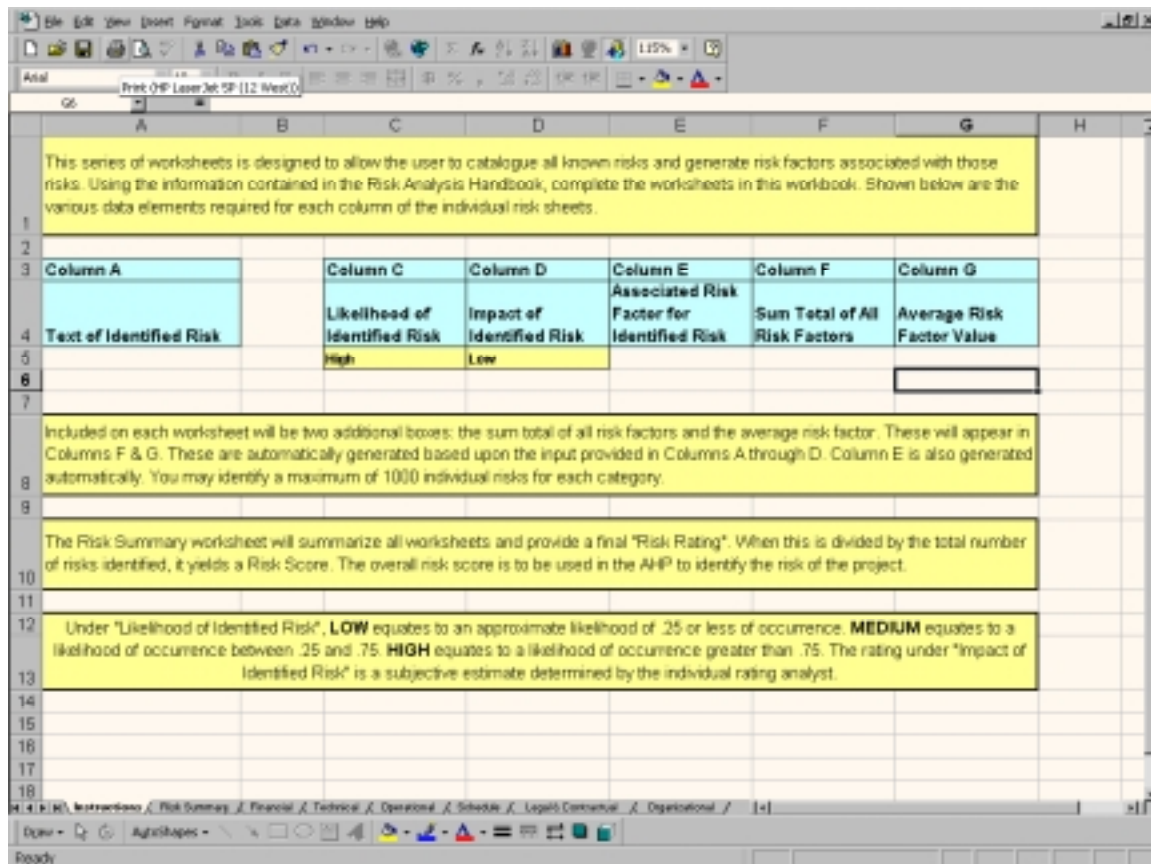
The use of the risk score has two benefits. The first is that it encourages users to include all identified risks. Using only the risk rating would discourage this practice since the higher the score, the higher the penalty. The second benefit is a more accurate overall picture of the project risk. Several low impact, low likelihood risks are far less dangerous than a single high impact, high likelihood risk. This will be captured in the risk score.

## Complete the Template

The accompanying Microsoft Excel® workbook (Risk Analysis Template.xls) provides a tool in which to catalogue and score risk. The workbook contains eight separate worksheets: an instruction sheet; a risk summary sheet; and six individual risk category sheets. Below is a description of what you will find in each worksheet.

### Instruction Sheet

This worksheet provides a brief overview of the Risk Analysis workbook. Columns are identified and terms are explained. No inputs are required on this worksheet.



### Risk Summary Sheet

This worksheet is a self-generating summary of the proposal's risk ratings and risk scores for each risk category as well as the overall scores for the alternative. The total risk score is the number that is of concern to the evaluator. The total

risk score should be the data element used in the Analytic Hierarchy Process and compared to other proposal alternatives. (See page B-5-10 for example of Risk Summary Sheet) **This worksheet is self-generating and no data should be entered directly on this page.**

### Risk Category Worksheets

These worksheets are where information is entered for analysis. There is one worksheet for each of the six risk categories. Each of the risk category worksheets has the same column headings. The information to be provided is as follows:

- Column A** Identify the individual risks associated with the particular category. **Input a textual description** of the risk in this column. *For example: Under Technical Risks, one identified risk could be difficulties integrating systems that are not supported by current architecture.*
- Column C** **Input the likelihood of occurrence** for the identified risk. Input **High** (probability of .75 to 1.00), **Medium** (probability of .25 to .75), or **Low** (probability of 0 to .25).
- Column D** **Input the impact** of the risk on the project if it is realized. Input **High** (significant impact), **Medium** (moderate impact), **Low** (very little impact).
- Column E** This column is **automatically generated**. The number appearing here is the **individual risk factor** for the risk and is a factor of columns C and D.
- Column F** This box is **automatically generated**. It is the **risk rating** and is found by summing the individual risk factors for the entire risk category.
- Column G** This box is **automatically generated**. It is the **risk score** for the category and is found by dividing the risk rating (Column F) by the total number of risks identified within the category.

**Before printing, remember to set your print area or else you will print several hundred pages.**

## Evaluating the Risk Analysis

The proposals will be evaluated on the three sub-criteria under Risk listed in the Decision Hierarchy (See the *Guide*, Figures 1&3).

**Risk Score:** The risk score will be used to determine the level of impact risk has on the proposed project. Given that the scale will vary from project to project, risk scores will be placed in a Low, Medium, or High effect category, where:

**Low** is for Risk Scores between 1 and 3

**Medium** is for Risk Scores between 4 and 6

**High** is for Risk Scores between 7 and 9

Even if the proposal yields a high risk score, it does not mean that the proposal will be rejected. Rather, in many cases high-risk proposals yield the highest returns. This type of consideration is in line with VA's current effort in moving towards portfolio management where proposals with varying levels of risk could be selected given that they should produce higher returns. (**Note:** After completing the template and deriving the results, be sure to print a copy of the risk summary sheet and attach it to the application and input the results in Chapter III, Part II, Section 4.1).

**Quality of Risk Score:** This sub-criterion will be evaluated on whether the proposal team identified all potential risks associated with a given alternative. If all risks have been identified, then the evaluators will give the highest score for this area. However, if the reviewer can identify risks that the proposal team did not, then the evaluation will decrease. (**Note:** Develop this section in Chapter III, Part II, Section 4.2)

**Quality of Risk Control Plan:** This sub-criterion will be evaluated on quality of the risk control plan. A good plan identifies the individual responsible for initiating the controls. It further identifies the project variance (e.g., 10% cost or schedule overruns) that will initiate corrective action. These variances may be cost overruns, schedule overruns, etc. Developing control plans can counter the negative impact that risks may have on the project. Consequently, proposal teams *should present feasible control plans, which can improve the overall Risk criteria score.* (**Note:** Develop this section in Chapter III, Part II, Section 4.3).



**Example of the Risk Summary Sheet**

	Risk Rating By Category	Risk Score	Total Number of Identified Risks	Relative Risk Level
Financial Risk	9.0	4.50	2	MEDIUM
Technical Risk	16.0	5.33	3	MEDIUM
Operational Risk	3.0	3.00	1	LOW
Schedule Risk	4.0	2.00	2	LOW
Legal & Contractual	5.0	2.50	2	LOW
Organizational	8.0	4.00	2	MEDIUM
<b>TOTAL</b>	<b>45.0</b>	<b>3.75</b>	<b>12</b>	<b>MEDIUM</b>

## G. EARNED VALUE ANALYSIS GUIDE

This guide provides instructions on how to complete an earned value analysis. Developing an earned value analysis is premised upon the completion of a well-developed project plan. The information required to complete an earned value analysis includes:

- Project title;
- Project tracking number.
- The identification of critical path milestones;
- Budgeted % of work performed for each critical path milestone;
- Planned critical path milestone start and completion dates;
- Budgeted dollars for work performed for each critical path milestone;
- Project start and end dates

Be sure to attach the following documents to the completed Application (Chapter III, Part II):

<b>Deliverable</b>	<b>Directions</b>
Earned Value Template	Print/Attach a copy of completed earned value template to the application.
Project Plan	Attach copy of completed project plan.
Progress Reports	As critical path milestones are completed.

Project Plan, at a minimum, should include:

- Project Title and Tracking Number
- All Critical Path Milestones (CPM)
- Budgeted % of work performed for each CPM
- Planned start and completion date for each CPM
- Planned expenditures for each CPM
- Total Project Budget
- Planned Project Start and End dates

### Overview

Earned value is a planning and budget summary tool, which identifies expenditure and scheduling projections for established critical path milestones. Critical path milestones represent a significant point in the development of a project, where the initiation of each milestone is dependent on the completion of a prior milestone (a linear process). This tool gives a project manager the ability to track actual project progress and expenditures at the completion of each critical path milestone, against planned figures, which results in project variances. These variances can be used to identify schedule and cost overruns so that they can be resolved as quickly as possible.

Earned Value utilizes projections derived from a completed project plan (in accordance with OMB Circular No. A-11, Appendix 300C, 1999), to create a tracking and evaluation system that allows the project manager and VA to assess a given project's progress. The tool is linear, tracking project milestones, one after another. It assumes that each phase is completed prior to the start of another phase.



## The Process

Earned value incorporates four variables in measuring a project's ability to stay within the planned budget and schedule. These four variables (critical path milestones, % of work performed, schedule and budget) are estimated during the proposal stage – within the Earned Value Template. Those estimates are derived from the proposal's project plan, which should detail the project's various stages. The Capital Investment Board, during the Capital Investment Methodology process evaluates and adopts the earned value plan, when approving and allocating project funding. Only Earned Value projections are needed to complete the Earned Value task for the proposal stage.

However, Earned Value is a tool that is used throughout the project lifecycle. Once the project is approved and funded, project tracking begins based upon the critical path milestones, total daily effort, schedule and budget figures established during the proposal stage of the process. As the project approaches the completion of each critical path milestone, the *planned* are compared to *actuals* for each of the variables.

After the project begins, VA and the project manager exchange information, at the completion of each critical path milestone, to determine project progress. This tool allows VA and project managers to identify concerns before they threaten project completion.

## Complete the Template

This template consists of 2 separate worksheets. The first, "Earned Value Analysis" is designed to assess performance at the conclusion of each critical path milestone. The second, "Planning Report" allows the project manager to calculate the earned value of work performed at any given time prior to completion of a milestone. It also provides forecasts of projected expenditures and labor efforts. Combined, these two worksheets allow the project manager a quick and simple method of assessing work performance. If a more

comprehensive assessment is required, Microsoft Project® allows project managers to develop detailed project plans and monitor them throughout their completion.

## Getting Started

Step 1. Open the file titled *Earned Value Template.xls*

Step 2. Go to the worksheet *Earned Value Analysis*. On this sheet you will fill in ONLY the light blue fields during the initial phase. Later you will complete the yellow cells.

Step 3. At the top of the sheet, input the Project Title and Project Number. These should be found on the proposal application.

Step 4. Input the planned Project Start Date and End Date. Below these cells is a cell for the current date that is automatically generated by Excel and will be used in various calculations. Do not attempt to input data into this cell. To the right of these dates are two dark blue fields with white text. The top cell calculates the total budget for work to be performed. The information is derived from Column H. The lower cell is the total cost of work performed as of the most recent completion of a critical path milestone. The information is derived from Column J. These cells are automatically generated and should not be changed.

## Input Initial Proposal Information

Input information into the light blue cells of the worksheet as specified in the Description column below:

Column	Title	Description
A	<b>Critical Milestone</b>	Input a brief description of the Critical Path Milestone as specified in the project plan.
B	Budgeted Percentage of Work Performed	Input the estimated percentage of total project work allocated to the specific milestone. For example, if you estimate that to complete this milestone will require 10 percent of the total project effort, you would input a "10" in this cell. The total of all cells in this column should add to 100 percent. This can be checked in Cell B594.
E	Planned Start Date	Input the anticipated start date for the milestone in the standard date format MM/DD/YY.
F	Planned Completion Date	Input the anticipated completion date for the milestone in the standard date format MM/DD/YY.
H	Budgeted Dollars for Work Performed	Input the amount (in dollars) budgeted for completion of the specified milestone. The total of all milestones, and the total allocated for the entire project will appear in Cell H6.

You will return to this worksheet later to input additional information in the yellow boxes.

One example for an IT project might include:

Critical Milestone	Budgeted Percentage of Work Performed	Planned Start Date	Planned Completion Date	Budgeted Dollars for Work Performed
Completion of the Requirements Analysis	8%	03/30/2000	04/30/2000	\$750,000.00
Completion of Data Modeling	8%	05/1/2000	06/01/2000	\$750,000.00
Completion of System Design	40%	06/02/2000	10/24/2000	\$5,000,000.00
Completion of Implementation	19%	10/25/2000	1/10/2001	\$2,000,000.00
Completion of Testing	10%	1/11/2000	2/20/2001	\$750,000.00
Completion of Training	15%	2/21/2001	4/15/2001	\$750,000.00

while a construction example might include:

Critical Milestone	Budgeted Percentage of Work Performed	Planned Start Date	Planned Completion Date	Budgeted Dollars for Work Performed
Architectural and Infrastructure Review	5%	05/15/2000	06/06/2000	\$600,000.00
Legal and Environmental Review	5%	06/07/2000	07/01/2000	\$600,000.00
Award Construction Contract	1%	07/02/2000	07/06/2000	\$10,000.00
Mid-Point Review of Construction	40%	07/07/2000	12/20/2000	\$4,800,000.00
Completion Review of Construction	40%	12/21/2000	5/30/2001	\$4,800,000.00
Space Deliver/Occupancy	9%	06/01/2001	07/10/2001	\$1,100,000.00

*Remember that the critical path milestones used to complete the earned value analysis are directly derived from the project plan. These are the milestones that require completion before another milestone can begin.*

### Monitoring Project Performance during Milestone Progress

Select the worksheet *Planning Report*. You will notice that certain pieces of information have carried over from the *Earned Value Analysis* worksheet including the Critical Milestone, Planned Completion Date, and Budgeted Dollars for Work Performed. These latter two are important since they will serve as benchmarks for monitoring performance.

Column A contains milestone status information. All cells in this column should initially be set to read "Not Started". If this is not the case, select Cell A12. From the pull-down list, select "Not Started". Highlight the cell and drag from the lower right corner down throughout the column to Cell A593. All cells in Column A should now read "Not Started". Now set the first milestone status in Column A to read "In Progress" from the pull-down list in Cell A12. When the milestone is complete, you will change the status to "Complete" from the pull-down list, and

set the next milestone status to read "In Progress". Since this template monitors the Critical Path Milestones, you will monitor only one milestone at a time.

At some point you will be requested to generate a Progress Report. To do this, you will input two pieces of information in Columns L & M. On this worksheet, you will input information ONLY in the gray fields. Input information into the gray cells of the worksheet as specified in the Description column below:

Column	Title	Description
L	Percentage of Work Performed to Date for Milestone	As of the date of the report generation, estimate the percentage of work completed for the specified milestone. For example, if you estimate that 60 percent of the work toward the first milestone is complete, input a "60" in the cell.
M	Dollars Expended to Date for Milestone	<p>As of the date of the report generation, input the number of dollars expended toward completion of the milestone. For example, if \$500,000 have been spent (not obligated), you would input "500,000" in the cell. If contractor labor is being used, calculate monies spent as follows:</p> <p><u>Fixed Price Contract:</u> Multiply the percentage in Column L by the Budgeted Dollars for Work Performed in Column I. Fixed price generally implies a direct correlation between expenditures and level of effort. Cost overruns will require adjustments to appear in Column J of the <i>Earned Value Analysis</i> worksheet.</p> <p><u>Time and Materials Contract:</u> Multiply the varying rates for labor against the hours billed for each category to date. This provides the current level of direct expenditures.</p>

Once these data have been input, several pieces of information will be generated automatically. These are described in the table below:

Column	Title	Description
N	Forecast Level of Actual Effort for Milestone	This is a forecast based upon linear interpolation of progress to date. A forecast below 100 percent implies that you are presently ahead of schedule and expect to complete the milestone using less effort than originally budgeted. Over 100 percent means that you are expected to expend more labor than originally budgeted by the number of percentage points over 100.
O	Forecast of Actual Cost of Work Performed for Milestone	This is a forecast of total spending on milestone based upon a linear interpolation of spending to date. In other words, it is what you can expect to spend to complete the milestone based upon what has already been spent.
P	Forecast Percentage of Actual Cost of Work Performed for Milestone	This is a percentage calculation of Column O. It is a forecast of the expected percentage level of budgeted dollars to be spent to complete the milestone.
Q	Earned Value of Work Performed for Milestone	This is calculated by multiplying the Percentage of Work Performed to Date by the Budgeted Dollars for Work Performed. It is the dollar value of work already performed based upon the original budget for the individual milestone.

Column	Title	Description
R	Current Earned Value Balance for Milestone	This is the difference between Column Q and Column M or the difference between the Earned Value of Work Performed and the Dollars Expended to Date for the Milestone. It is a measure of the current surplus or deficit of spending on the milestone.
S	Anticipated Milestone Completion Date	Based upon current progress of work performed, this is a forecast completion date for the milestone.

As progress occurs, Columns L & M will be updated with the most recent information until the milestone is complete. At that point, change the status indicator in Column A to read "Complete". Return to the worksheet *Earned Value Analysis*.

### Analyzing the Milestone

You will now complete the yellow sections on the *Earned Value Analysis* worksheet as follows:

Column	Title	Description
D	Actual Percentage of Work Performed	This is a percentage of the total project effort expended to complete the milestone. This can easily be calculated as follows: When Column L of <i>Planning Report</i> worksheet equals 100 percent (milestone is complete), take the value of Column N on the same worksheet (Forecast Level of Actual Effort for Milestone) and multiply it by Column B on the <i>Earned Value Analysis</i> worksheet (Budgeted Percentage of Work Performed). For example, if the resulting value of Column N of the <i>Planning Report</i> is 87% when the milestone is complete, and the Budgeted Level of Effort (Column B) of <i>Earned Value Analysis</i> is 15 percent, the resulting Actual Percentage of Work Performed is 13.05 percent.
G	Actual Completion Date	Input the date of completion for the milestone.
J	Actual Expenditures	Input the total amount of monies expended to complete the milestone.

Once these data are inputted, certain pieces of information will automatically be generated. These are columns shown in gray and described below:

Column	Title	Description
P	Individual Milestone Variance in Budgeted Work Performed	This is a percentage calculation of surplus or deficit of effort expended for individual milestone. A positive percentage indicates that the level of effort expended was less than the effort that was originally budgeted. A negative value indicates the opposite.
Q	Sum Variance of Budgeted Work Performed	This is a percentage calculation of surplus or deficit of effort expended for the entire project. A positive percentage indicates that the level of effort expended was less than the effort that was originally budgeted. A negative value indicates the opposite.
R	Individual Milestone Variance in Budget	This is the surplus or deficit of expenditures for the individual milestone.
S	Sum Variance in Budget	This is the surplus or deficit of expenditures for the entire project.
T	Percentage Budget Variance for Individual Milestone	This is a percentage calculation of the surplus or deficit of expenditures for the individual milestone.
U	Sum Percentage Budget Variance	This is a percentage calculation of the surplus or deficit of expenditures for the entire project.
V	Days Variance from Schedule	At the completion of each milestone, this is a measure of the days ahead or behind in schedule for the entire project. A positive value indicates a project that is ahead of schedule, a negative value indicates a project that is behind schedule.

It should be emphasized again that this template is designed to evaluate milestones in the critical path only, therefore each milestone must be completed before the successive milestone can begin. However, the data should be collected and monitored for each milestone throughout the project to achieve maximum effectiveness.

### Print a Progress Report

By selecting the *Planning Report* you should be able to print a progress report directly from the screen. The sheet has been formatted to contain all necessary information in successive sheets. HOWEVER, due to hidden columns, a full print without selecting relevant pages will result in over 240 pages of print. It is suggested that Print Preview be used to verify the print selection.

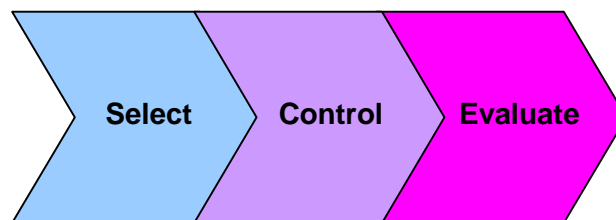


## **V. ATTACHMENTS**

## INFORMATION TECHNOLOGY INVESTMENT PORTFOLIO SYSTEM

One of the components that will help VA realize its goals and implement recommended improvements to the capital investment process includes the installation of the Information Technology Investment Portfolio System (I-TIPS). I-TIPS is an innovative web-based application developed to assist Federal agencies in managing their IT investments in accordance with the Clinger-Cohen Act and other applicable statutory direction and guidance, as well as government and industry best practices. I-TIPS is helping managers and staff involved in IT planning and investment decision making to assess initiatives in terms of their costs, risks, and expected returns, and to help them determine and maintain the appropriate mix of IT investments with regard to these and other organizational considerations.

I-TIPS is based on a three phased approach:



- The **Select** phase consists of screening viable alternatives, identifying performance measures, conducting assessments using Risk and Cost Effectiveness analysis, as well as other forms of analysis, and validating/scoring those initiatives. Once approved and funded the next phase begins.
- The **Control** phase consists of monitoring the performance of the initiatives. This includes conducting Earned Value analysis and reviewing previously established project plans and determining whether the initiatives are on track, and if they are not, then initiating the control plans to get them on track.
- The **Evaluate** phase is the final step, which involves receiving project feedback, conducting lessons learned forums to improve next year's process, and comparing expected benefits and actual benefits achieved.

VA is the first agency to apply this approach to all types of capital investments, thus extending the capabilities. The VA version of this approach is called the VA Capital Asset Management System or CAMS. CAMS will capture, track and evaluate all VA capital assets within the Department. CAMS will become the "software umbrella" encapsulating a VA planner's workbench. VA has undertaken a phased implementation of CAMS. For FY 2002, CAMS will be available for certain Information Technology proposal teams to access electronic versions of the Capital

Investment Methodology Guide and the analytical templates. All other proposals will be loaded into CAMS using electronic versions of the completed applications. In addition, proposal teams will have the ability to post their completed investment proposal packages to CAMS, which will expedite the transmission of documents as well as provide a system to track the proposal's progression.

All proposals that have been submitted under the Capital Investment Methodology process have been loaded into the CAMS Resource Library.

Other CAMS features include:

Investment Manager – Enables you to collect, maintain, and monitor initiative-related information such as initiative type, life cycle financial information, performance measures, and cost and schedule information.

Portfolio Manager – Allows you to select initiatives into an investment portfolio and assists in determining the appropriate mix of initiatives.

Discussion Database – Provides an area for collaborative dialogue about initiative- or portfolio-related issues among groups of I-TIPS users.

Resource Library – Serves as a central repository for initiative or portfolio related documentation.

Calendar – Allows you to post events to the I-TIPS calendar such as meeting or deliverable dates.

Tasking – Enables you to task I-TIPS users with specific tasks and to update and track those tasks through completion.

Feedback – Allows you to provide feedback or bug reporting directly to the I-TIPS development team.

Combined, these features provide CAMS users a simple way to store and locate capital investment information, develop reports, and evaluate the initiatives that make up the entire investment portfolio.

**CONTACTS**

<b>Administration</b>	<b>Name</b>	<b>Number</b>
<b>NCA</b>		
All Proposals	Dan Tucker	(202) 273-5157
<b>Staff Offices</b>		
All Proposals	Ron Walters	(202) 273-5260
<b>VBA</b>		
All Proposals	Steve Goldstein	(202) 273-6945
<b>VHA</b>		
Construction/Leases	William Webb	(202) 565-6122
Equipment	Jimmy Schiller	(202) 273-5875
Information Technology	George Monferdini	(202) 273-8675
KLF Menu Issues	Kathy Frisbee	(703) 476-8783

## DATA SOURCES

### **VA Websites**

- VA Capital Investment Process <http://vaww.va.gov/budget/capital> or [www.va.gov/budget/capital](http://www.va.gov/budget/capital)
- VA Information Resources Management <http://vaww.va.gov/oirm> or [www.va.gov/oirm](http://www.va.gov/oirm)
- VA Facilities Management <http://vaww.va.gov/facilities.htm> or [www.va.gov/facilities.gov](http://www.va.gov/facilities.gov)

### **VA Documents**

- VA Capital Investment Methodology Guide <http://vaww.va.gov/budget/capital> or call Capital Budgeting and Oversight Service (041G) on 202 273-5255
- Department of Veterans Affairs Strategic Plan FY 2000-2005  
[Http://www.va.gov/Strategic](http://www.va.gov/Strategic) or call Strategic Planning Service (008B1) on 202 273-5131
- Departmental Performance Plan – Department of Veterans Affairs FY 2001 Congressional Budget Submission, Volume 6  
<http://www.va.gov/budget/perfmeas/pmdgo.htm>

### **Information Technology Documents**

- Information Technology Strategic Plan <http://vaww.va.gov/orim/cio/itstrat.pdf> or call Office of Policy and Program Assistance (045A1) on 202 273-8125
- VA IT Capital Planning Handbook
- VA IT I-TIPS User Guide/CAMS User Guide
- OMB Capital Programming Guide
- VA Strategic Plan
- Vision of Information Technology Enhanced Customer Service
- VA Technical Architecture
- Computer Security Act of 1987 (PL 100-235)

- NIST Special Publication 800-18
- Federal Acquisition Strategy (FAR)- Part 7- Acquisition Planning (Federal)
- Federal Acquisition Strategy (FAR)- Part 807- Acquisition Planning (VA)
- Federal Acquisition and Streamlining Act of 1994
- Government Performance and Results Act (GPRA) of 1993
- Clinger-Cohen Act of 1996
- OMB Capital Programming Guide
- GAO Best Practices

### **NCA**

- National Cemetery Strategic Plan, Planning Division (402A2) on 202 273-5167

### **VBA**

- Surveys and Research Staff of the Data Management Office for VBA  
Intranet -- <http://vbaw.vba.va.gov/bl/20/cfo/surv/srsindex.html> or  
Internet –<http://www.vba.va.gov/surveys>
- Employee and Customer Satisfaction Surveys, Contact name: Lynne Heltman at 202 273-5440
- Compensation & Pension Projected workload, C&P Service Budget Staff
- Hardware and Software Cost data, Office of Information Management
- Payroll/Pension/Supply Cost data, Office of Resource Management
- VBA Strategic Plan

### **VHA**

- Cost and Workload Data ([KLFmenu.med.va.gov](http://KLFmenu.med.va.gov))
- Survey Support National Customer Feedback Center
- VHA Performance Plan ([vaww.va.gov/stratinit/index.htm](http://vaww.va.gov/stratinit/index.htm))

- VISN Network Plans, Office of Policy, Planning and Performance (105) on (202) 273-8932
- VHA Strategic Plan

### **OMB Documents**

- OMB Circular A-11, Preparation and Submission of Budget Estimates (7/1/98)  
<http://www.whitehouse.gov/OMB/circulars/a11/99toc.html>
- OMB Capital Programming Guide, Supplement to OMB Circular A-11  
<http://www.whitehouse.gov/OMB/circulars/a11/cpgtoc.html>
- OMB Circular A-94, Guidelines and Discount Rates for Benefits-Cost Analysis of Federal Programs <http://www.whitehouse.gov/OMB/circulars/a094/a094.htm>
- OMB Circular A-130, Management of Federal Information Resources (2/8/96)  
<http://www.whitehouse.gov/OMB/circulars/a130/a130.html>
- OMB Policy Letter 92-1, Inherently Governmental Functions (9/23/92)  
<http://www.whitehouse.gov/OMB>

### **Other Federal Documents**

- FASA Federal Acquisition and Streamlining Act of 1994  
[www.va.gov/budget/capital/index.htm](http://www.va.gov/budget/capital/index.htm) Reference Library, Additional References
- GPRA Government Performance and Results Act of 1993  
[www.va.gov/budget/capital/index.htm](http://www.va.gov/budget/capital/index.htm) Reference Library, Additional References
- Clinger-Cohen National Defense Authorization Act of 1996  
[www.va.gov/budget/capital/index.htm](http://www.va.gov/budget/capital/index.htm) Reference Library, Additional References

## GLOSSARY OF TERMS

**Activity-Based Costing** – A cost accounting method that measures the cost and performance of process-related activities and cost objects. It assigns direct and indirect costs to cost objects, such as products or customers, based on their use of activities. It recognizes the causal relationship of cost drivers.

**Alternatives** – viable options to achieve the same programmatic goals wherever practical and more cost beneficial, including new program design or operational improvements through cross-cutting initiatives or cross-servicing prior to selecting an alternative.

**Analytic Hierarchy Process (AHP)** – This decision-making hierarchy is a tool used in the Capital Investment Methodology process to illustrate the decision hierarchy. The software used to run this model is ExpertChoice. The Capital Investment Board established weights to each criteria and sub-criteria on the hierarchy to assist in determining project-funding options. (See Prioritization Process for details)

**Baseline Assessment** – Examines existing portfolio, current performance of an asset, and establishes an assessment of need using various evaluation activities.

**Benefit-to-Cost Ratio (BCR)** – Benefits divided by costs, where both are discounted to a present value or equivalent uniform annual value.

**Breakeven Analysis** – A technique for determining that value of a variable which results in benefits (savings) equaling costs.

**Board** – Refers to the Veterans Affairs Capital Investment Board

**Building Decisions** – A decision regarding the design, financing, engineering, construction, management, or operation of a building.

**Call Letter** – A directive issued annually outlining the general parameters necessary to complete the investment application cycle for the review, evaluation, prioritization and selection of a proposal for inclusion in the VA Capital Plan.

**Capital Assets** – Land, structures, equipment, and intellectual property (e.g., software) that are used by the Federal Government and have an estimated useful life of two years or more.

**Capital Costs** – The costs of acquiring, substantially improving, expanding, changing the functional use of, or replacing a building or building systems.



**Cash Flow** – The stream of monetary (dollar) values, costs and benefits, resulting from a project investment.

**Cost-Benefit Analysis** – A systematic quantitative method of assessing the desirability of government projects or policies when it is important to take a long view of future effects and a broad view of possible side-effects. (OMB Circular A-94)

**Cost-Effectiveness Analysis** – A systematic quantitative method for comparing the costs of alternative means of achieving the same stream of benefits or a given objective. (OMB Circular A-94)

**Critical Path Milestones** – Critical path milestones represent significant points in the development of a project, where the initiation of each milestone is dependent on the completion of a prior milestone (i.e., a linear process). As a result, monitoring each CPM through the use of a project plan and Earned Value analysis will improve overall project management within the Department.

**Customer Service Criteria** – Serving our nation's veterans is a fundamental mission of the VA function. The Department exists to give meaning, purpose and reality to America's commitment to her veterans. The goal of VA is to be the very best in the marketplace, because it is what our veterans deserve. Superior customer service is valued on five criteria: Quality, Waiting Time, Increase in New Customers, Increased Benefits, and Increase Access to Existing Customers. Together, these create a comprehensive value of the way our country's veterans are serviced by our great nation

**Delta** – Represents the incremental change in a process needed to close a process gap.

**Discount Factor** – A multiplicative number (calculated from a discount formula for a given discount rate and interest period) that is used to convert costs and benefits occurring at different times to a common time.

**Discount Rate** – The interest rate used in calculating the present value of expected yearly benefits and costs. (OMB Circular A-94)

**Discounting** – A technique for converting cash flows that occur over time to equivalent amounts at a common time.

**Disposal Plan** – Issues to be addressed at the end of an asset's life cycle including the removal of the asset from service, planning for the transition to a replacement if required, and final removal of the asset from the agency's property inventory in a timely cost-effective manner. Disposal of complex assets or systems may involve a multi-year process requiring significant effort and funding.

**Earned Value** – A management technique that relates resource planning to schedules and to technical, cost, and schedule requirements. All work is planned, budgeted, and scheduled in time-phase “planned value” increments constituting a cost and measurement baseline. As work is performed, it is ‘earned’ on the same basis it was planned, in dollars or other quantifiable units such as labor hours. Planned value compared with earned value measures the dollar volume of work planned vs. the equivalent dollar volume of work accomplished. Any differences result in schedule/budget variances.

**Economic Life** – The time span over which the firm expects to receive the benefits of an asset.

**Energy Savings Performance Contracts (ESPC)** – A program developed by the Department of Energy designed to reduce energy consumption in federally owned and operated facilities. It is assumed that by reducing energy consumption, the demand for constructing additional generation plants will not be necessary. A typical ESPC contract consists of VA hiring a private developer who invests their capital in high-technology energy improvements, which results in VA significantly reducing energy consumption. A significant portion of the savings is passed on to the developer in the form of annual payments, which amortizes their investment up to a period not to exceed 25 years. Any proposed award of a task order (or an individual amendment to an original task order under the amended task order approach) that exceeds \$4 million for a single facility, or \$10 million for a task order involving multiple facilities within a network will require submission of a capital investment proposal to the VACIB.

**Enhanced-Use** – Leasing out underutilized VA property on a long-term basis to non-VA users for uses compatible with VA programs. The Department will be able to obtain facilities, services, and/or money for VA requirements that would otherwise be unavailable or unaffordable.

**Enhanced Sharing Agreement** – Allows individual facilities to contract out for services with any health-care provider, or other entity or individual. These contracts can be made for acquisition of infrastructure, equipment, IT, and personnel services. There are no maximum dollar limitations for the investments.

**Equipment Capital Purchases** – Any equipment or interconnected system or subsystem of equipment used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information.

**Other equipment purchases/leases** – Non-capital purchases or leases for equipment as defined above. (Object class 23.3 & 31.0)

**Fair Market Value** – The estimated amount that can be realized, determined by the price at which a bona fide sales have been consummated for project of like kind, quality, and quantity in a particular market at any moment in time.

**Future Value** – The value of a benefit or a cost at some point in the future, considering the time value of money.

**Gap Analysis** – To identify the “as is” and “to be.” Then defining the steps to move from “as is” to “to be”.

**High Performing Workforce Criterion** – The VA's core values include excellence in service, programs and people. Part of this value is the VA's commitment to performing at the highest level of competence, and creating a culture where everyone is accountable, respected and appreciated. To maintain this value, projects are evaluated on their ability to contribute to a high performing workforce, which is comprised of: Recruitment and Retention, Training and Development, and Employee Morale. Together we can make VA the employer of choice.

**Inflation** – The proportionate rate of change in the general price level, as opposed to the proportionate increase in a specific price. Inflation is usually measured by a broad-based price index, such as the implicit deflator for Gross Domestic Product or the Consumer Price Index. (OMB Circular A-94)

**Information Technology** – Any equipment or interconnected system or subsystems of equipment that are used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the executive agency. (see OMB Capital Planning Guide, pg. 79, for additional clarification.)

**Infrastructure Projects** – Building systems, additions, new construction, renovation, parking garages, acquisitions and disposal of properties.

**Investment Proposal Team (IPT)** – Business lines should apply an integrated project and process development approach to manage capital assets, using the IPT for continuity and accountability. The team should be cross-functional to accomplish tasks and reflect the user community and the project's stakeholders. The IPT should have a core of project management, technical proficiencies appropriate to the investment proposal, value management, budget, finance, and procurement knowledge.

**Intergovernmental Payments** – Payments for all information technology services within agencies, between executive branch agencies (e.g., FTS 2000), judicial and legislative branches, and State and Local governments.

**Intergovernmental Collections** – Collections for all information technology services within agencies, between executive branch agencies, judicial and legislative branches, and State and Local governments.

**I-TIPS** – Investment Technology Investment Portfolio System is an innovative web-based application developed to assist Federal agencies manage their investments in accordance with Clinger-Cohen Act and other applicable statutory direction and guidance, as well as government and industry best practices. I-TIPS is helping managers and staff involved in planning and investment decision making to assess initiatives in terms of their costs, risk, and expected returns, and to help them determine and maintain the appropriate mix of investments with regard to these and other organizational considerations.

**Legacy Systems** – Fully developed IT system that requires continued evaluation for flexibility of integration with new systems to ensure business applications and infrastructure align with strategic goals.

**Life Cycle Cost** – The overall estimated cost for a particular program alternative over the time period corresponding to the life of the program, including direct and indirect initial costs plus any periodic or continuing costs of operation and maintenance. (OMB Circular A-94)

**Maintenance and Repair Costs** – The total of labor, material, and other related costs incurred in conducting corrective and preventative maintenance and repair on a building, or on its systems and components, or both.

**Maintenance Plan** – Activities/plans to ensure asset is maintained and meets VA maintenance requirements.

**Medical Equipment** – Any diagnostic or treatment modality used in the delivery of health care.

**Mission** – Clear and concise statement, summarizing what the agency or office does and presenting the main purpose for its major functions and operations.

**Mitigation Plan** – A plan created by the VA Capital Investment Panel for identifying and correcting deficiencies or improving in the capital investment application prior to OMB submission.

**Multi-Attribute Decision-Making Hierarchy** – A tool used in the Capital Investment Methodology process to illustrate the decision hierarchy. The Capital Investment Board established weights to each criteria and sub-criteria on the hierarchy to assist in determining project-funding options.

**Needs Assessment** – A research and planning activity designed to determine the extent and needs of a population or community, to evaluate existing

(baseline) programs and the utilization patterns, and plan programs to meet those needs. Five predominant approaches include: the key informant (health care provider) approach, the community forum (stakeholder) approach, rates-under-treatment approach, social indicators approach, and the field survey approach.

**Net Benefits (Savings)** – The difference between the benefits and the costs when both are discounted to present or annual value dollars.

**Net Book Value** – The recorded cost of an asset less any recorded accumulated depreciation.

**Net Present Value** – The difference between the discounted present value of benefits and the discounted present value of costs. (OMB Circular A-94)

**Nominal Discount Rate** – The rate of interest reflecting the time value of money stemming both from inflation and the real earning power of money over time. This is the discount rate used in discount formulas or in selecting discount factors when future benefits and costs is expressed in current dollars.

**Nominal Interest Rate** – An interest rate that is not adjusted to remove the effects of actual or expected inflation. Market interest rates are generally nominal interest rates. (OMB Circular A-94)

**Non-Medical Equipment** – Non-recurring items consisting of furniture, equipment, etc.

**Non-Quantifiable Benefits** – Those benefits that are internal non-customer related. They are established benefits without substantial quantifiable support. Any use of this benefit must be coupled with the rationale for the lack of supporting data and calculations. (See Chapter III, Part II)

**Objectives** – A more specific statement presenting something that is to be accomplished. It is more specific than a strategic goal, but general enough to allow flexibility in how it will be accomplished. An objective must relate directly to and support accomplishment of the strategic goal.

**One VA** – One VA refers to the initiative's ability to address a crosscutting initiative proposed by one administration that supports at least one other administration in a combined effort to deliver seamless integration of benefits or services to the customer. One VA customer service is further defined as the ability to provide One VA world class service to veterans and their families through the effective management of people, technology, processes and financial resources.

**Operating Cost** – The expenses incurred during the normal operation of a building or a building system, IT systems or component, including labor, materials, utilities, and other related costs.

**Opportunity Cost** – The maximum worth of a good or input among possible alternative uses. (OMB Circular A-94)

**Outcomes** – An assessment of the results of a program activity compared to its intended purpose.

**Outlay** – Actual dollars already spent.

**Output** – Information, product or procedure that is received, analyzed, and improved upon before submission or completion.

**Panel** – Refers to the Veterans Affairs Capital Investment Panel (VACIP)

**Performance Gap** – The unmet need between the baseline activity and the capacity of the existing asset against the projected demand. (See also Gap Analysis)

**Performance Goals** – Descriptions of the milestones for each strategic goal in the strategic plan year. Performance goals also appear in the annual performance plan for the specific year covered by the performance plan as defined levels (targets) that are quantifiable and measurable.

**Performance Measures/Standards** – An indicator having a numerical target level or other measurable value, this facilitates the future assessment of efficiency, effectiveness, and results. Quantitative outputs/outcomes/results, e.g. timeliness, error and defect rates, complaints, customer satisfaction levels and responsiveness rates (cost per unit of result, service, or output), and receipt, collection and credit obligation rates.

**Personnel (Compensation and Benefits)** – Includes the salary (compensation) and benefits for government personnel (both civilian and military) who perform information technology function 51% or more of their time. Functions include but are not limited to policy, management, systems development, operations, telecommunications, computer security, contracting, and secretarial support. Personnel in user organizations who simply use information technology assets incidental to the performance of their primary functions are not to be included.

**Physical Life** – Anticipated number of productive years of an asset.

**Portfolio Monitoring** – A tool for weighing the risk and return of potential project portfolios against one another.

**Program Evaluation** – The evaluations of programs or services to determine their effectiveness and/or efficiency. Program evaluations are often the basis for which strategic goals are formed.

**Project Cost** – Identifies the funds needed as a cost target in the requested budget year.

**Project Plan** – The documented establishment of critical path milestones, including individual planned expenditures and schedules per milestone.

**Projected Workload** – The estimated future workload that establishes an approved forecast target, which the proposal will satisfy, as the unmet need.

**Real Interest Rate** – An interest rate that has been adjusted to remove the effect of expected or actual inflation. Real interest rates can be approximated by subtracting the expected or actual inflation rate from a nominal interest rate. (OMB Circular A-94)

**Recurring Costs** – Those costs that are incurred in a regular pattern each year throughout the study period.

**Renovation** – The modification of an existing building or facility to include new functions and systems, or accommodate the growth of existing programs and components improving functional adjacencies and technical requirements.

**Replacement Cost** – Building component replacement and related costs, included in the capital budget, that are expected to be incurred during the study period.

**Resale Value** – The monetary sum expected from the disposal of an asset at the end of its economic life, its useful life, or at the end of the study period.

**Residual Value** – The salvage value of an item, after depreciation or at the end of its useful life.

**Return on Taxpayer Investment Criterion** – The taxpayers of this country expect that their hard-earned dollars be spent only after extensive and thoughtful consideration. To honor this commitment, VA only evaluates proposals, which have undergone thorough analysis. This analysis includes Cost-Effectiveness Analysis, Alternatives Analysis, Cost Savings Analysis, and Non-quantifiable Benefits Analysis. Together, the use of these criteria demonstrates our respect for the veteran and the American people.

**Risk Criterion** – Risk is an inherent part of any capital investment. However, project risk can be mitigated. Identifying and controlling project risk can significantly impact a project's success. In this case, risk can be analyzed in six

components: Financial, Technical, Operational, Schedule, Legal & Contractual, and Organizational risks.

**Risk/Return** – The foundation by which portfolio monitoring is based. When the two variables are weighed against one another, they project the most efficient combination of projects among the array of proposals.

**Salvage Value** – The value of an asset, assigned for tax computation purposes that are expected to remain at the end of the depreciation period.

**Sensitivity Analysis** – A test of the outcome of an analysis completed by altering one or more variables from an initially assumed value.

**Seismic Criterion** – The seismic criterion refers to the initiative's ability to mitigate an immediate and verifiable seismic threat to VA staff, patient and the public. This includes: Information on what percentage of the project cost is dedicated to seismic criterion. (At least 70% of the project's investment value should be dedicated to this feature, before it is considered under this category.); Engineering study certification of the condition of the structure; Certification of the seismic zone; and Acknowledgement of inclusion in the VA Seismic Study completed in response to the Presidential Directive on seismic safety.

**Software** – Any software, including firmware, specifically designed to make use of and extend the capabilities of Federal information Processing (FIP) equipment.

**Capital Purchases** – Software purchases (including one-time obligations for long-term licenses) or leases costing \$35,000 or more for system programs; application programs; and commercial off the shelf (COTS) software. Software also includes independent subroutines, related groups of routines, sets or systems of programs; databases, and software documentation.

**Other Software Purchases/leases** – Software purchases or leases costing less than \$25,000.

**Software Costs** – The costs associated with developing program language or adapting commercial off-the-shelf programs for specific agency functions as well as the testing, roll-out, and installation into the existing or planned system architecture.

**Special Emphasis Criterion** – Special emphasis refers to the project's ability to support one or more of the FY 2002 Special Emphasis Programs, which include : Spinal Cord Injury (SCI); Seriously Chronically Mentally Ill (SMI); Traumatic Brain Injury (TBI); Blind Rehabilitation; Post Traumatic Stress Disorder; Prosthetics (Amputation).



**Strategic Alignment Criterion** – The VA strategy defines the mission and goals of the Department. It is this strategy which weaves the path to the VA's future. Alignment with these objectives creates a Department working in unison toward accomplishing the goal. The five categories identified by the VA include: quality of Life, Ensure Smooth Transition, Honor and Memorialize, Public Health and Socioeconomic Well Being, and One VA.

**Sunk Cost** – A cost incurred in the past that will not be affected by any present or future decision. Sunk costs should be ignored in determining whether a new investment is worthwhile. (OMB Circular A-94)

**Supplies** – Any consumable item designed specifically for use with equipment, software, services, or support services.

**Support Services Cost** – Cost includes both the contract services costs for developing software, IT maintenance, or contracting for studies concerning the acquisition of IT systems or the architectural/engineering services for the design of a construction project or the use of a private management construction firm used to provide project management inspections during construction, as well as value engineering.

**Total Life-Cycle Costs** – All direct and indirect costs, including planning and other costs or procurement; all periodic or continuing cost of operation and maintenance and cost of decommissioning the disposal. It can be used to determine whether or not a given project, which is expected to reduce future costs, is economically justified or to determine the efficient scale of investment when several levels of investment are under consideration.

**Treasury Rates** – Rates of interest on marketable Treasury debt. Such debt is issued in maturities ranging from 91 days to 30 years. (OMB Circular A-94)

**Useful Life** – The period of time over which an investment is considered to meet its original objective and/or function.

**Workload** – Expected amount of work to be performed in a set amount of time (e.g., number of exams, studies, or users and will be determined by category of investment).